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ABSTRACT

American society is based on work. The industrial revolution exposed a growing proportion of the population to unemployment, underemployment, and dislocation. Early theoreticians believed that unemployment was a temporary labor market imbalance that would correct itself with downward wage adjustments. John Maynard Keynes, on the other hand, argued that unemployment is involuntary and results from government policies that can be changed. The Employment Act of 1946 legislated the nation's intent to achieve full employment, an ideal still held. However, the only way to achieve full employment is through increased spending that fuels inflation. To date, the principal strategy for fighting inflation has been economic restraint, which results in ever-higher levels of unemployment. The strategy proposed to correct the situation emphasizes policies that conform to the actual operation of the labor market, with a full range of anti-inflationary policies in place before attempts are made to reach the 8 percent unemployment barrier. Probably the best device above the 6 percent unemployment rate is a temporary marginal wage subsidy to create jobs. Below the 6 percent rate, strategies to improve productivity in the lower range of jobs are appropriate. To provide the training needed to increase productivity, American educational systems will have to do a better job of making sure youth acquire a high level of basic skills. However, overall economic expansion is a necessity if unemployment is to be reduced. (KC)

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A SOCIETY BASED ON WORK

Anthony Patrick Carnevale

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The National Center for Research in Vocational Education
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FOREWORD

A Society Based on Work presents an overview of the economic changes occurring in America today and their implications for employment training. The problems of unemployment and inflation are put into perspective in the context of a changing labor supply. Employment and training strategies are suggested for both the disadvantaged and relatively advantaged worker.

This paper is one of nine papers produced by the National Center Clearinghouse's Information Analysis Program in 1984. It is hoped that the analysis of information on topics of interest to the field of vocational education will contribute to improved programming. Papers in the series should be of interest to all vocational and adult educators, including federal and state agency personnel, teacher educators, researchers, administrators, teachers, and support staff.

The profession is indebted to Dr. Anthony Patrick Carnevale for the scholarship demonstrated in the preparation of this paper. Dr. Carnevale is a consulting economist based in Washington, D.C.

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Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

EXECUTIVE SUMMARY

This paper is intended for state and national education and labor policymakers. It presents an interpretation of the literature on problems of employment and productivity for the purpose of stimulating a fresh appraisal of the issues.

American society is based on work. Whereas participation in the culture and polity are not predicated legally on work, the normative connection is strong. Individuals who are either willing and able to work or those who cannot work by virtue of their age, family responsibility, or inability to find a job are guaranteed full participation in our society.

The industrial revolution brought on the notion of unemployment when work specialization, urbanization, and automation exposed a growing proportion of the population to unemployment, underemployment, and dislocation. Early theoreticians believed that unemployment was a temporary labor market imbalance that would self-correct with downward wage adjustments. Thus, economies were thought to be flexible and self-regulating.

John Maynard Keynes, on the other hand, argued that increased prices would stimulate the profits and investments necessary to economic recovery and eventual full employment. The Keynesian economic paradigm served to establish that (1) unemployment is involuntary and results from government policies and (2) manipulation of macroeconomic aggregates can lead to full employment.

The Employment Act of 1946 legislated the nation's intent to arrive at and maintain full employment. Work for all who want it has been elevated to a public commitment and a popular expectation that has been encouraged by the promise of successive administrations that have claimed they can deliver on full employment. At the present time, the American concern for labor market imbalance extends beyond unemployment to the extent of poverty and the distribution of income.

The ideal standard for the full employment rate is that rate where vacancies equal job seekers. If our single goal were to find work for all who want it, the means are available. With increased spending, a sufficiently overheated economy can melt away even the most intransigent deficiencies in the labor market and arrive at full employment. The result, however, would be an unacceptably high rate of inflation. Our economic organization, in effect, complicates the public commitment to full employment. The promotion of full employment is tied to controlling inflation. According to most economists, the unemployment rate deemed necessary to stabilize inflation is 7 to 8 percent, with existing institutional structures.

To date, the principal strategy for fighting inflation has been economic restraint. This traditional policy of economywide restraint to fight inflation minimizes direct public interference in private enterprise and is, thereby, preferred. Ever higher levels of unemployment are required, however, to achieve price stability. To the extent that price stability, as well as other economic goals, makes claims on macroeconomic policies, those policies are limited in their potential for achieving full employment.

High levels of unemployment are persistent, and our average unemployment exceeds that of our trading neighbors by any measure. The record is the more unsatisfying because of the maldistribution of unemployment and earnings by age, sex, and race. Unemployment is consistently concentrated in the low-income, minority, and female populations.

Policy instruments to remedy the labor market distress are required. In addition to the quantity of jobs, public economic management may be saddled with the added responsibility for the quality of jobs, as well. Jobs that provide employment security and a career ladder through formal and informal training opportunities differ markedly from jobs concentrated in the low-wage sectors of the economy. The best solution for the present labor market imbalance is a complementary mix of macroeconomic and microeconomic policies in a simultaneous assault on inflation and unemployment.

The overall proposed strategy emphasizes policies that conform to the actual operation of the labor market. A full range of anti-inflation policies and standby policies needs to be in place before we attempt to reach the 8 percent unemployment barrier. Probably the best device above the 6 percent unemployment rate is a temporary marginal wage subsidy. Such a subsidy would create the most jobs with the least stimulus, thereby minimizing inflationary impacts. Employment or job creation strategies are the most important ones to use until the 6 percent unemployment rate is reached. Below the 6 percent unemployment rate, strategies to improve productivity in the lower tier of jobs by expanded human capital development are most appropriate. The quality of human resources is a critical variable in long-term economic growth.

The proposed strategy has implications for issues related to training. Historically, we have attempted to redistribute earnings by providing access to preemployment education and training. Preemployment education and training provide access to jobs, whereas formal and informal learning on the job determines career patterns, earning increases, and progress up career ladders. Although the current investment in the quantity of preemployment education and training may be sufficient, the investment in quality may not. There is evidence to suggest that, whereas educational attainment in the American economy exceeds job requirements, minimum achievement requirements for all Americans are increasing. The evolution toward an information society will make basic skills increasingly important as vocational skills. The critical education challenge for the current system of preemployment education will be to improve the quality of its offerings and to complement workplace training with midcareer education and training for adults.

Some measure of reform can be achieved in the nation's junior and senior high schools. Secondary schools should provide a set of basic skills to enable all youths to negotiate the five- to seven-year sojourn in transition to their first "real job" around age twenty-five. Alternative strategies for providing more structure and equal opportunity in the critical years after secondary school range from expansion of in-residence programs targeted on disadvantaged youth, to the provision of counseling services, to national services programs. Compensatory education and training will help in tight labor markets, but in a slack labor market they are likely to have little effect. Overall economic expansion is a necessity, even if it is not a sufficient condition for redistributing jobs.

Labor market distress from unemployment, underemployment, and severe dislocation presents a threat to our economy, culture, and polity that cannot be theorized away. Claiming that unemployment is a national phenomenon does not remedy the distress in the workplace. Ideologically and theoretically perfect remedies cannot be allowed to crowd out less elegant but workable strategies.

WORK IN AMERICA

Ours is a society based on work. Work is a legal quid pro quo for consumption of life's basic necessities in the United States and is a normative precondition for participation in the polity and culture. Only those unable to work are guaranteed minimum living standards from unearned public assistance. Given the importance of work, it is little wonder that unemployment is of paramount importance in the United States. The availability of jobs as well as the distribution of well-paid and poorly-paid jobs largely determines the number of officially poor and the range in our income distribution.

In a democratic society that guarantees "equal protection," both unemployment and the distribution of earnings from work are crucial. Both the quantity and the quality of jobs are at issue, especially if people or places demonstrate consistent unemployment or if people are consistently relegated to jobs with low earnings. What follows will focus both on unemployment and the distribution of good and bad jobs as they affect labor market distress and the earnings distribution. The discussion is intended for state and national education and labor policymakers. It presents an interpretation of the literature related to problems of employment and productivity for the purpose of stimulating a fresh appraisal of the issues.

Full Employment in History

It is not uncommon these days for elections to be won or lost on the basis of the employment performance of national, regional, and local economies. The prospect for employment ranks among the primary concerns of the citizenry and the principle responsibilities of governments. It has not always been so. The great monuments of antiquity were built more for the greater glory of pharaoh and empire than for public work relief. Roman emperors provided bread and circuses not because the citizenry was unemployed but because the mob was unruly. Early Christians suffered work as Adam's curse after the fall. At the same time, they believed poverty and the giving of alms were holy and in imitation of Christ. Their ambivalence between demanding that all should work to pay for Adam's sin and their Christian duty to provide for the poor reverberates down the centuries as modern politicians and "technocrats" attempt to distinguish between the deserving and the undeserving poor.

The notion of unemployment was unthinkable in medieval times. The seamless web of social relations guaranteed everyone a role in society and kept them in it.

The concept of unemployment began with the industrial revolution. As agriculture gave way to industry, work was increasingly organized to the rhythms of rational production systems rather than the seasonal changes that characterized preindustrial eras. Individual well-being was more dependent on the calculus of supply and demand as economic cycles substituted for natural cycles. With work specialization and urbanization, industrial employees became vulnerable to the efficient operation and management of artificial economic and social systems. As industrialization and urbanization accelerated, a growing proportion of national populations became exposed to unemployment, underemployment, and dislocation.

As war, famine, and economic cycles increased, the well-heeled were offended by the sight of beggars and frightened by brigands. In addition, a primitive economics suggested that wealth was a direct product of the number of people working. As a result of the ever-increasing numbers of indigents and the belief that wealth increases directly with the amount of labor supplied, publicly funded workhouses were substituted for the voluntary giving of alms providing for the idle. In the main, workhouses were intended to force the voluntarily idle to provide a quid pro quo for public support. Destitution and unemployment were regarded as the result of flawed personal character rather than the result of systematic social failure.

Early theoreticians elaborated upon the operations of economic and social systems. In the eighteenth century, Smith, Ricardo, Malthus, and others tended to ascribe natural characteristics to human systems, as did the political and social theoreticians of their day. They believed that economic activity resulted from relationships more complex than the simple arithmetic sum of the work effort of each individual citizen. They perceived a complex economic "system" requiring constant adjustments. Unemployment was, according to their view, a natural but temporary by-product of the adjustment process. Persistent unemployment reflected an unwillingness to adjust.

The common belief of these early theoreticians that economies are flexible and self-regulating suggests that unemployment, underemployment, and dislocation are self-correcting if workers are willing to accept wages consistent with economic conditions. Unemployment and other forms of labor market imbalance were viewed as temporary phenomenon that would self-correct with downward wage adjustments. Persistent unemployment was regarded as evidence of an incorrigible preference for leisure over work. As a result, unemployment and other forms of labor market imbalance were regarded as voluntary—reflecting an unwillingness to work for the available wage. Moreover, any attempts to alleviate the suffering of the unemployed were considered inadvisable even when wages declined below subsistence. Interventions in the natural workings of economic systems would inhibit natural adjustments and discourage overall growth to the eventual detriment of all concerned.

Nineteenth century theoreticians, especially Marx, posited that persistent unemployment is a natural by-product of industrial societies. Marx and later mainstream economic thinkers (such as William Beveridge) agreed that capitalist systems require "an unemployed labor pool" to be pressed into service when economic cycles accelerate and to be held in ready reserve during downturns. Whereas they continued to regard persistent unemployment as evidence of incorrigibility, they regarded cyclical unemployment among the "reserve army of the unemployed" as involuntary. The Marxist solution was revolution.

Beveridge and other mainstream economists regarded cyclical unemployment as involuntary, but unavoidable, if the natural workings of economic cycles are to be allowed to continue in the interest of all. These economists agreed with their predecessors that downward wage adjustments during recessions would eventually absorb the unemployed as reduced prices expanded production into recoveries. Their solution was to ameliorate the suffering of the "deserving poor" and to reduce the severity of economic cycles with labor exchanges that would more efficiently match available labor supply with accelerating demand, thereby reducing the duration of unemployment.

With the advent of the Great Depression, unemployment took center stage among public problems. Most subscribed to the traditional view that, with lower wages, all can be reemployed. John Maynard Keynes offered the heretical view that downward wage adjustments and deflated prices only exacerbate economic decline. Keynes argued that increased prices stimulate the profits and investments necessary to economic recovery. Expanding demand through increased

spending mobilizes unutilized resources, resulting in a minimum of inflation until full employment is achieved. At a time when most opinion favored balanced budgets, Keynes argued for expanded government spending in general and deficit spending when the economy was not fully employed.

Keynes explained that the marginal propensity to save increases with income. As a result, as economies grow, governments have to assume the share of spending stimulus lost to private savings. Moreover, he argued that savers and investors are different people with different motives. If, for various reasons, savings do not translate into productive investments, the government has to step in with additional stimuli to raise prices. This would raise profits and stimulate investment in high-profit enterprises. The government may also tax unutilized savings through progressive income taxes to pay for stimulus or to provide for public investments in human resources or other kinds of infrastructures that do not interest private investors.

The Keynesian economic paradigm was eventually accepted as a proven success. The Keynesian revolution established the following four principles for employment policy:

- Unemployment is involuntary. Moreover, it is the result of government policies. Governments can and should maintain full employment.

- Full employment can be arrived at through the manipulation of macro-economic aggregates—overall spending. Economies are complex but flexible and responsive to the manipulation of economic aggregates. Direct public intervention into private markets is unnecessary.

- Maintaining full employment requires ever-increasing levels of public spending to compensate for the declining marginal propensity to consume among private individuals as their incomes increase.

- Inflation and unemployment are incompatible. So long as there are unutilized resources, additional spending will not increase prices.

Keynesian stimulus ended the recession of 1973. Wartime stimulus drove the American unemployment rate down to 1.5 percent in 1943 and 1944. This was a remarkable achievement, given that unemployment had never dropped below 10 percent between 1933 and 1941. The postwar boom added further credence to the Keynesian view. Moreover, the United States emerged from the war as the strongest nation in the world, economically and militarily. New international responsibilities emerged, especially with the new threat from Stalinist Russia. International responsibility was matched with opportunity. The dollar was the world's reserve currency; we could print as many dollars as we liked. In addition, we were the world's dominant trader. International responsibility and opportunity combined to add a fifth precept to the postwar Keynesian system:

- Free trade benefits all trading partners. The international economy will be rationalized such that ever more high-technology, high-wage production will concentrate in advanced economies, leaving expanded opportunities for relatively lower-wage, labor-intensive production to developing nations. Nurtured with American dollars, the world will move up the development ladder in lockstep.

The postwar history of unemployment challenged all of these precepts. The precepts of the Keynesian system have been amended, elaborated upon, and directly contradicted in both theory and practice. At this writing, strategies for full employment are numerous and confused. In the

absence of a consistent theoretical framework proven in practice, the nation is paralyzed in the face of persistently high levels of unemployment. Moreover, the gradual acceptance of public responsibility for maintaining employment for all those who want to work—all those who are not voluntarily unemployed—was broadened and deepened in the postwar Keynesian euphoria.

Unable to deliver on prices or full employment, successive national governments have fastened on a series of ever more radical gimmicks to promote growth. When these have failed, there have been attempts to shift the blame for high unemployment elsewhere, to redefine unemployment and other forms of labor market imbalance, and to suggest that most, if not all, unemployment is voluntary. In general, we have come full circle back to the pre-Keynesian view that unemployment is essentially voluntary because employees will not accept wage adjustments. Because unemployment has persisted, there has been a great deal of ad hoc theorizing after the fact that suggests agreement with the pre-Keynesians that some rate of unemployment—as much as 8 percent during the foreseeable future—is a natural and unavoidable artifact of advanced industrial economies such as our own.

Current Status

Before turning to an analysis of the post-Keynesian experience with labor market distress and extracting some general lessons from our recent experience, a broader perspective is appropriate. Almost forty years have passed since the passage of the Employment Act of 1946. That law, a monument to Keynesian optimism, legislated the nation's intention to arrive at and maintain full employment. It also bespoke our confidence that we had the means to do so through the manipulation of economic aggregates while limiting public interventions into private enterprise.

To some extent, the promise of the act has been realized. Fluctuations in economic activity have been much less severe since the late forties. What is more, we have avoided major depressions. Between the Civil War and World War II, unemployment rates exceeded an annual rate of 9 percent five times. Since that time, annual unemployment has exceeded 9 percent only twice. In 1975, unemployment averaged 8.5 percent. At the peak of the recession of 1981 to 1982, unemployment exceeded 10 percent for ten months between September of 1982 and June of 1983, averaging 9.6 percent in 1982 and 1983 overall.

Our experience has fallen far short of our intentions in other respects. Our average unemployment persistently exceeds that of our trading partners by any measure. Our overall record would be much worse if not for the fact that stimulus from wartime mobilization reduced our unemployment rate in two World Wars and two limited conflicts (Korea and Vietnam). In addition, we have maintained our employment performance with at least two "cold wars" in addition to the four "hot" ones, persistent balance-of-payments deficits, and beggar-thy-neighbor devaluations of the dollar that ultimately resulted in a breakdown of the international currency system.

The ideal standard for the full employment rate is that rate where vacancies equal job seekers. In this case, there is a job for everyone who wants one and all unemployment is the result of voluntary job changing—"frictional unemployment." The United States does not collect job vacancy data systematically, and therefore no accurate data on vacancies exist. Without such information, the best basis for comparison is the 4 percent standard actually achieved between 1955 and 1957 and in the late sixties. Unemployment rates have been held below 4 percent in nine other years over the postwar period, but these lower rates are generally regarded as the product of war mobilization that forced American production beyond the true capacity of the nation's human resources, plants, and equipment.

As a result, rates below 4 percent may be safely regarded as inflationary. By comparison with a 4 percent standard, the United States did not do very well over the postwar era. The average rate of unemployment between 1948 and 1983 was 5.52 percent. If we exclude 1948, when war stimulus was still in effect and demobilization incomplete, and the Korean (1951 to 1953) and Vietnam (1966 to 1969) War buildups, the postwar average rises to 6 percent. In addition, the peacetime average worsens over time from 5.13 percent in the fifties, to 5.52 percent in the sixties, 6.21 percent in the seventies, and a rapid increase to 8.48 percent between 1980 and the end of 1983. Available estimates suggest that rates will not decline appreciably before 1990.

The record on unemployment is the more unsatisfying because of the maldistribution of unemployment. Since detailed statistics became available in the mid-fifties, peacetime unemployment (excluding the Vietnam buildup) has varied immensely by age, sex, and race. Peacetime unemployment for white males over twenty averaged 4.2 percent between 1955 and 1982. The comparable unemployment rate for blacks and all others was 11.04 percent. The comparable unemployment rate for white and black females was 6 percent and 10.8 percent respectively. Unemployment among sixteen- to nineteen-year-old males averaged 15.3 percent for whites and 28.2 percent for blacks. Similarly, the average peacetime unemployment for sixteen- to nineteen-year-old females was 14 percent for whites and 32.8 percent for blacks.

From an individual point of view, the psychological and financial costs of unemployment have surely declined. The notion that unemployment is the result of economic and social trends and decisions beyond the control of affected individuals has become firmly established. The individual self-loathing that accompanied unemployment during and prior to the Great Depression has surely been ameliorated. Although the American "safety net," in the form of income transfers, unemployment insurance, retraining, and social services, is set lower than those of our advanced industrial counterparts, it does substantially reduce the real costs of unemployment in lost wages and deterioration in an individual's human capital.

The economic costs of maintaining the unemployed are minimal. The availability of income support increases the duration of unemployment by a matter of a few weeks. Even the most generous assistance programs, such as those briefly available to America's displaced workers, stretched the duration of unemployment by only a maximum of five weeks. Moreover, these costs are probably worth bearing if additional search time allows former employees to get their jobs back or to find other jobs that utilize their productive skills more fully.

The real costs of the new psychology of unemployment are social. They are incurred in the alienation of the former employees who feel manipulated, powerless, and angry. This is especially true if individuals believe they have been or may be disemployed by deliberate government policies designed to cool an overheated economy. In instances where unemployment is increasing, that same alienation may spread to the employed populations, who fear they will be next.

The acceptance by governments of both the moral and financial responsibility for unemployment has increased pressures on public institutions enormously. The social and financial costs of unemployment have not been reduced; they have been refocused on public institutions. In addition, those pressures are unlikely to abate at their source. The historical shift toward an increasingly interdependent and specialized economic system will only be encouraged by new technologies and the shift into the marketplace of services once supplied in the home. Moreover, the decline in economic dependency among females and youth has increased the proportion of Americans vulnerable to unemployment.

Our society is based on work more than ever. Legal requirements that make work a quid pro quo for income and consumption are firmly established in our income transfer system. Whereas participation in the culture and polity are not legally predicated on work, the normative connection between work and full participation in the culture and polity is strong. Indeed, recognition of that normative relationship accounts for at least some share of the surge in job seeking by youths and females.

Future pressures on employment are uncertain. With growing participation in the labor market, public institutions may find themselves "chasing their tails" in pursuit of full employment. Relative success in job creation may result in increased labor force participation as new opportunities encourage new entrants into the labor market. One hope for the government may be to increase family incomes to the point where additional family members may not need to seek work in order to improve the family's financial position. At the same time, such a strategy could encourage compensating labor force growth by increasing birthrates and the overall size of the labor pool. Alternatively, increased wages and opportunities for women could also drive birthrates down and decrease the overall size of the labor pool.

If the future of labor force pressures on governments committed to full employment is uncertain, the recent history of unemployment is clear. The quantity of jobs has not met the public commitment to full employment. Unable to deliver a sufficient quantity of jobs, policymakers have made an understandable attempt to redefine full employment. The notion of "effective" unemployment rates and other statistical distinctions between unemployment among high earners or between heads of families and others tends to circumscribe public responsibility for the mass of the unemployed.

Similar distinctions in theory and practice between those who are "voluntarily" unemployed and those who are out of work "involuntarily" serve the same function. The notion that unemployment is natural and unavoidable represents the most aggressive version of these arguments. The question remains as to whether these distinctions will withstand analytic scrutiny or reduce public expectations for full employment.

Beyond Full Employment

Beyond concern for the quantity of jobs lies new and unchartered terrain that will only be touched upon here. Public economic management may be saddled with added responsibility for the quality as well as the quantity of jobs. Several factors suggest this possibility: displaced workers who become reemployed with substantial wage reductions; females, minorities, and youths concentrated in low-wage jobs with few career ladders; twenty-five to forty-four-year-old baby-boom workers overcrowding the workplace and faced with limited opportunities for promotion; and the possibility of a general trend in new job growth toward low-wage, low-skill service jobs.

Both income distribution and long-term growth problems are suggested by the growing concern for job quality. The distributional problem begins with the apparent fact that lifetime earnings are increasingly driven by the opportunity for formal and informal workplace training. Even our most aggressive attempts at income redistribution through direct transfers and preemployment education and training, for instance, have foundered for want of eventual access to good jobs—jobs that provide a career ladder through formal and informal training. Good jobs, whether measured by wages or working conditions, seem to be in short supply. Moreover, some evidence suggests they will decline as a proportion of overall work opportunities.

Whereas knowledge and skills secured from preemployment education and training are critical to securing a good job, they are less and less so as educational attainment increases and the demand for higher levels of education declines. Should the number of good jobs decline relative to the number of individuals with sufficient preemployment education and training to secure them, public economic managers will be presented with two new short-term problems: (1) the need to find a means to distribute good jobs fairly and (2) political pressures to find a strategy to increase the number of good jobs.

Add to these a longer-term and perhaps more serious problem: Without repeating the familiar litany of evidence, suffice it to say that the quality of human resources is the critical variable in long-term economic growth possibilities (Carnevale 1983). In the short term, however, human resource investments are driven by the demand for them in labor markets. Should the structure of jobs not fully utilize available preemployment education and training among job seekers and require lesser levels of workplace education and training, investments in education, training, and other forms of human resource development will be discouraged. Short-term market demand for human capital investments will discourage investments and long-term growth possibilities. Public authorities may eventually need to consider a third policy problem: the need for a human resources investment strategy that supersedes labor market requirements of preemployment education and training and encourages upgrading beyond current job requirements in the workplace.

The following sections principally concern the immediate problems of job quantity--the levels of job creation and unemployment. The distribution of good and bad jobs will be considered as it affects labor market distress that results from low earnings from work. What follows will first consider the current thinking on employment and inflation. A subsequent analysis will consider the future prospect for employment by reviewing what is known about factors affecting both the supply of and demand for future employees. Alternative policies for promoting and sustaining high levels of employment in the context of price stability will then be considered.

UNEMPLOYMENT IN AN AGE OF INFLATION

The remedy for unemployment is no mystery. If our single goal is to find work for all who want it, the means are readily available. With increased spending and loose money, a sufficiently overheated economy can melt away even the most intransigent deficiencies in the labor market and arrive at full employment. (Unemployment during World War II fell to 1.2 percent in 1944 with stimulus from war production and the mobilization of adult males.) As almost everyone knows, however, such a stratagem would produce unacceptably high rates of inflation in the short term. According to one's theoretical bent, the resultant inflation would all but erase employment gains either "naturally" or as a result of the eventual economic restraints that would have to be imposed to reestablish price stability. Any discussion of promoting "full employment" is necessarily a discussion of the means to control inflation. Any theory of labor market imbalance is necessarily a theory of inflation.

It was not always so. Classical economists presumed that downturns in the business cycle would reduce profits and force wage reductions. To the extent that employees are willing to accept wage reductions no jobs will be lost. To the the extent that employees are unwilling to do so, they will become voluntarily unemployed either until their wage expectations shift downward or until recovery, with its attendant rising prices and wages, produces a wage for which they are willing to work—what economists call their "reservation wage."

In the Keynesian system, a little inflation is a good thing. Inflation increases prices and thereby encourages production and employment. Conversely, declining wages and prices reduce prices and profits, discourage expansion, and exacerbate economic decline. Deflation is to be avoided by using "automatic stabilizers," including minimum wage laws and unemployment insurance, that provide a wage and price floor below which the economy is not allowed to degenerate.

According to the original Keynesian formulation, economic output can increase with relatively little impact on inflation until full employment is achieved. Beyond full employment, an extra dose of stimulus results in "real inflation," as the economy's full capacity is strained and additional stimuli increase prices with no effect on the quantity of output. Even at full employment, however, a little inflation is benign as slowly increasing prices create illusory profits that encourage greater investments and expansion in the economy's productive capacity.

Experience over the decades since World War II has demonstrated clearly that we no longer live in the world of deflation characteristic of the Depression era. Ours is a world of inflation. The optimistic Keynesian trade-off between inflation and unemployment has long since given way to an agonizing vacillation between price stability and unemployment goals that seems to stop far short of remedying one because of fear of the other. The effect has been what was unthinkable in the Keynesian world of the thirties and forties: Inflation and unemployment now come cheek to jowl. If we reject one, we must choose the other. In order to avoid painful choices, we often settle for too much of each.

What's Worse, Unemployment Or Inflation?

Our principle strategy for fighting inflation, irrespective of its source, is to reduce wage costs. Wages represent the lion's share of operating costs in the American economy and are an obvious target for price reductions. In addition, even if inflation does not originate with wages, wage adjustment to other price shocks represents the long-term "core" of the inflation problem. In other words, even if wages do not start the inflation, they are the "transmission belt" that ensures that even temporary price shocks will become a permanent add-on to operating costs. Reductions in wage costs are achieved by restraining overall economic activity, by reducing overall spending, or by reducing the flow of dollars in the economy.

Historically, the short-term effect of overall restraint has not been to reduce overall wage rates or prices immediately. Wages and prices are fairly rigid in the short term. As a result, the immediate effect of overall restraint is to reduce the number of employees and output produced while the wages of those still working and the prices of products that are still produced remain fairly stable. In short, the immediate effects of restraint are disemployment and reduced output. To use the economist's jargon, the quantity effect overwhelms the price effect in the short term. With unemployment and less output, artificially maintained wages and prices will eventually decline. This trade-off—between unemployment and lost output in the short term for some measure of price stability in the long term—has become the central and most controversial economic issue in the post-World War II era.

The disemployment effect of our traditional anti-inflationary stratagem is reinforced by both the institutional reality of the American economy and by productivity considerations. A large measure of productivity derives from the successful integration of employees, plants, and equipment. Wage reductions can disturb the implicit and, in the case of collectively bargained wages, explicit contracts between employees and management. As a result, layoffs are less disruptive to "team productivity" than general wage reductions. In addition, organized labor, by virtue of its anticollectivist history, best represents those who remain employed. Labor leaders bespeak a genuine belief that disemployment is a social and personal catastrophe and consistently support public responsibility for the unemployed. Their support, however, comes after the fact of unemployment and does little to provide employment security for the mass of unorganized employees.

Organized labor tends to represent employees in the "primary labor market"—the labor market where the mutual commitment between employees and employers is strongest. Disemployment is discouraged in primary jobs by union pressures for job security and because employers have made substantial investments in employees and are loathe to lose their training investments. The resultant extension of employment security, well-funded temporary layoff provisions, and internal retraining of primary workers through private and public funding shifts the burden of restraint elsewhere. As a result, employees in secondary labor markets (i.e., in undesirable jobs with no union protection and with little employer training investment) and employees on the lower rungs of the career ladders in primary markets suffer a disproportionate share of the burden of anti-inflationary restraint.

Wage rigidities also discourage wage competition between low- and high-wage workers when labor markets are slack. A restrained economy produces a large labor surplus in the form of unemployment. Some contend that these workers are unemployed because they are unwilling to work for available wages. Although this notion may be appealing in theory, it has no relevance for the workaday world. Most of the unemployed are low-wage workers who would gladly compete with higher-wage employees for jobs. Others are dislocated from reasonably good jobs and would jump at the chance to take a slight pay cut and secure the job of one of their former co-workers.

Unfortunately, the American economy does not work that way. In order to maintain "team productivity," managers do not hire on the basis of wage offerings from prospective employees. Unemployed workers cannot gain access to jobs by offering to accept wages lower than employed workers. Access to decent jobs and wages in the American economy does not derive from a free market in wages. Even preemployment education and training are only loosely connected to job access by guaranteeing basic skills and providing a somewhat artificial sorting device to cut down on the volume of job seekers.

Unemployment encouraged by anti-inflationary policies is arguably worse than inflation, because it is unfair. Unemployed workers are not allowed to compete for their old jobs or for other jobs on the basis of their willingness to reduce their wages or accept jobs at lower wages than those who are working. Unemployment is also unfair because it is concentrated among certain kinds of people and in low-wage sectors of the economy. Occasionally, in the initial phases of severe recessions, the effects of anti-inflationary strategies will democratize unemployment. In the recession of 1982, for instance, even the adult male unemployment rate reached 9 percent. Historically, however, unemployment for adult males has exceeded 6 percent only three other times since the forties—in 1958 (6.2 percent), 1975 (6.7 percent), and 1981 (6.3 percent). In addition, during each of these periods, unemployment rates among females and minorities were at least twice as high. Moreover, while unemployment rates increase initially for everyone during a downturn, sustained unemployment or slow recoveries, such as the present one, tend to reinstate the concentration of unemployment.

Employers in a surplus labor market seek out preferred workers. As unemployment persists, prime-age white males are hired or rehired and their unemployment rate as well as their proportion of the total unemployment drops, while less-preferred workers comprise an increasing proportion of the unemployed, underemployed, and dislocated. This sorting process results in an eventual scarcity of preferred workers and increased wage demands by this most expensive group of employees. The net effect reduces the effectiveness of anti-inflationary restraint and lengthens the duration of unemployment for the less preferred workers.

The duration of unemployment also correlates with various measures of stress, crime, illness, and even death. Separation and divorce are linked to unemployment among households' prime earners (Sawhill 1983a). Unemployment is the most frequent corollary with child abuse, if not its most profound cause (Carnegie 1977). Brenner (1976) correlated statistically significant relationships between unemployment and various measures of social pathology. Whereas correlation does not prove causality, these studies do suggest that there is some connection between economic well-being and the tendency toward self-destructive and antisocial behavior.

The unemployment effects of anti-inflationary restraint also include an element of majoritarianism. Employed workers, if not primary workers, are always in the majority. As a matter of self-interest, they are concerned with and react to unemployment only if it is increasing and threatens their own job security. If unemployment is stable or declining, their principal economic threat comes from inflation. High and persistent unemployment that reduces inflation can create real wage increases for the employed. In deep recessions, the 1982 recession for instance, the majority are better off as a result of the disemployment of ever up to 10.6 percent of the labor force. The self-interest of the employed is best served by high, persistent, and stable unemployment accompanied by declining prices.

This "I'm all right, Jack" phenomenon accounts for the consistent public view expressed in opinion polls and voting behavior that inflation is public enemy number one, even when unemployment is high and persistent. Because people vote on the basis of the economic trend,

they are concerned about unemployment only when it is increasing. This reality encourages manufactured recoveries at election time and persistently high rates of unemployment that result when recoveries are aborted in fear of inflation. The difficulty is exacerbated by the fact that, although responsibility for involuntary unemployment has been shifted into the public realm, the unemployed are a minority with no institutional base in the economy, culture, or polity. The "liberal labor lobby" represents them only after they have become disemployed.

Finally, although involuntary unemployment has been accepted as a social problem, persistent unemployment has encouraged ad hoc theories and practices that suggest unemployment is voluntary, "natural," or insignificant—just "kids and women." These trends offer little social support for initiative on the part of the unemployed and nurture the seeds of self-doubt already implanted by labor market failure.

Unemployment is a personal tragedy for a minority of the citizenry and a social one to the extent that it is not random. Inflation is inherently more democratic. Its effects are always impartial. No one loses all earned income as a result of inflation. Inflation also tends to erode just about everyone's income. At the same time, money and its value represent a fundamental trust between the citizenry and the state. Viewed in this light, inflation attacks a venerable social contract that guarantees the value of currency and precedes public assumption of responsibility for the unemployed. Inflation makes any system of income security a phantom.

The present value of Social Security insurance contributions cannot possibly compensate for expected inflation, especially when contributions will not be realized for a great length of time. As such, inflation attacks those whose incomes are fixed by prior earnings. Inflation always confuses the bargain between present and future, discouraging investment critical to future welfare.

In sum, unemployment is personally unfair. It also violates the promise of full employment in the Employment Act of 1946 and the Humphrey-Hawkins Act of 1978. Moreover, it is a social problem to the extent that it is highly concentrated among specific groups of people, thereby encouraging invidious distinctions that are unhealthy in a democratic society. At the same time, inflation represents a failure to honor a basic social contract and threatens employment in the long term. At most, involuntary unemployment ought to be eliminated and inflation discouraged. At least the price of discouraging inflation ought to be fairly shared. Fairness is critical to any social system such as ours that is characterized by so many social, religious, ethnic, and regional cleavages.

Explaining "Stagflation"*: Theory and Practice

Common sense dictates that an economy arrives at full employment when there are sufficient jobs for everyone. In such a situation, the unemployment rate would not be zero. Individuals entering labor markets or switching jobs would be counted as unemployed, but there would be a sufficient number of job vacancies to absorb all of them. In a world buffeted by the dual constraints of unemployment and inflation, it has been increasingly difficult to make a practical goal of the aforementioned definition. Instead, we essentially define full employment as "the lowest rate of unemployment attainable under existing institutional structure that will not result in accelerated inflation" (Eckstein 1980).

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*"Stagflation" describes the economic condition that results from the simultaneous occurrence of high levels of inflation and unemployment.

The Johnson administration achieved such a rate at 4 percent in 1965. We know this because inflation did not increase until the rate slipped below 4 percent after 1965. Moreover, the Kennedy and Johnson economists had chosen 4 percent, because the unemployment rate had fallen to 4.1 percent in 1956 without aggravating prices.

Estimates of this "noninflationary rate of unemployment" (NAIRU)—the rate below which prices rise and above which prices fall—have trended upward since the Johnson administration achieved a 4 percent NAIRU. The NAIRU was generally believed to hover around 4.8 percent in the late sixties and early seventies (Gordon 1978). In the middle to late seventies, the generally accepted number was thought to be between 5.5 percent and 6 percent (Cagan 1977; Modigliani and Pademos 1975). By the late seventies, the accepted wisdom was that the NAIRU had breached the 6 percent barrier and was climbing rapidly (Hall 1979).

Current estimates place the NAIRU somewhere between 7.5 percent and 8 percent (Eckstein 1980). In short, the unemployment rate deemed necessary to stabilize inflation—not reduce it—is 8 percent or roughly twice the similar rate that actually succeeded in stabilizing inflation in 1956 and again in 1965.

Inflation defines full employment. The Humphrey-Hawkins Act of 1978, unlike its predecessor, the Employment Act of 1946, specifies a 4 percent unemployment "goal" consistent with the Johnson administration's postwar low. At the same time, the act specifies an inflation goal of 3 percent. The 3 percent inflation goal is not unreasonable by historical standards. It was exceeded only once between 1950 and 1968, when the consumer price index (CPI) reached 3.6 percent in 1957. With the exception of 1972, when wage and price controls were in effect and inflation only reached 3.3 percent, the CPI has exceeded 4 percent every year since 1968 and averaged double digits in four years (i.e., 1974, 1978, 1980, and 1981).

The 3 percent inflation target was also chosen because it is generally believed that when prices rise by more than 3 percent in any given year, any additional spending, to encourage growth or full employment or both, will increase prices and not the quantity of output. In other words, 3 percent is the inflation trigger, or the point at which inflation will begin to accelerate uncontrollably. When inflation rises above 3 percent, public officials and business people begin calculating inflation into their wages and prices. They include the inflation that has already occurred and inflation they expect to occur as a means of maintaining their real wages and prices. Incorporating inflationary expectations into wages and prices makes inflation a self-fulfilling prophecy and builds forward momentum for an inflationary spiral.

Even the most optimistic projections do not suggest that inflation will drop to a 3 percent annual rate before 1987. As a result, we should not expect unemployment to drop below 7 percent, or even 8 percent, until the last few years of the decade. This grim prospect, however, presumes "existing institutional structures"—if the reader will recall our definition of full employment—and current policies. Before turning to alternative policies and institutional arrangements, however, the next section reviews the theoretical and practical origins of the current dilemma in order to provide a backdrop for alternative institutional strategies and policy options. It is only through an investigation of alternatives to the current policy dilemma that we have any hope of resolving the Chinese puzzle set for us in the Humphrey-Hawkins Act of 1978.

Causes—Episodic and Systematic

Inflation is not a single, monolithic force. It is more of a process. Although prices have risen continuously over the postwar period, they have emanated from a complex set of forces. The

causes may be classified into either systematic or episodic ones. Systematic forces are those that are derived from the basic structure of the American economy, such as the structure of the labor force, "pattern" bargaining in unionized industry, the structure of jobs as between services and manufacturing, and the relative weight between public and private economic activity.

Episodic forces are occasional and largely external "price shocks" that affect any domestic economy. Food prices may increase with bad harvests, and foreign cartels such as OPEC may demand sudden price increases in basic goods. Episodic price shocks need not always be negative. Price shocks also include sudden declines in prices that may cause deflation. Sudden price increases need not result in inflation. A 10 percent increase in oil prices can be absorbed if the use of oil or some other item is curbed by an equivalent amount. Moreover, productivity increases can compensate for inflated prices.

If prices suddenly increase by 3 percent and productivity increases by an equivalent amount, barring the use of the productivity increase to expand wages, it will absorb the inflation. Alternatively, if people attempt to maintain their level of consumption prior to the price shock, they will increase their wages by the full price increase. Thereafter, the price shock will be incorporated into wage, price, and even interest rate demands. As such, it will become part of the persistent "core" or underlying rate of inflation. Moreover, as explained earlier, wages, prices, and interest rates are not only capable of exacting a premium for past inflation, they can also demand wage, price, and interest rate increases for the inflation "expected in the future." The effect of inflationary expections is to make increases in the core or underlying rate of inflation a self-fulfilling prophecy.

A Brief History of "Stagflation"

The relationship between inflation and unemployment is a happy liaison gone sour. Traditionally, the obvious means for curbing inflation has been to restrain overall economic activity. The notion is that lower sales will encourage reduced prices and wages. In fact, wages and prices decline only slowly. The immediate effect of restraint has been not to reduce prices and wages, but to reduce output and jobs. From the postwar era until the mid-sixties, generalized restraint brought price and wage reductions at the cost of a minimum of unemployment. It was generally agreed that the trade-off between unemployment and inflation was a good bargain. In addition, expectations of future inflation were a relatively minor factor, so long as inflation remained relatively low.

The consumer price index (CPI) was negative in 1949 and 1955, was lower than 1 percent in the three years between 1948 and 1965, and was less than 2 percent for thirteen of those same seventeen years. Throughout the same period, unemployment hovered around 5 percent in peacetime, exceeding 6 percent only once (in 1961) and declining well below 4 percent in the Korean and Vietnam War years. At the same time, the inflation-unemployment trade-off worsened slowly but steadily, as more and more stimulus seemed to be required to achieve acceptable levels of unemployment, and increasingly more aggressive restraint was required to drive inflation down.

General demand restraint was supplemented during this period by wage-price guideposts and "jawboning" from the White House, but the Phillips curve trade-off remained the essential anti-inflationary strategy throughout the fifties and sixties. (The Phillips curve is a theory that posits an inverse relationship between an increase in unemployment and an increase in inflation.) The strategy was made the more affordable by the persistent increase in productivity at about 3 percent per annum between World War II and the mid-sixties. The productivity trend ameliorated the impact of wage increases throughout the period.

After 1965, the inflation-unemployment trade-off deteriorated rapidly. Simultaneous momentum from tax cuts, stimulus from the Vietnam War buildup, and a continuation of domestic spending—public and private—overheated the economy dramatically in the latter half of the decade. Inflation reached 4.2 percent in 1968 and 5.4 percent in 1969. Overly ambitious at home and abroad, the Congress and the federal administration applied insufficient restraint. Inflation began to build up a momentum of its own, and wages, prices, and interest rates began adjusting to both past inflation and the inflation expected in the future. At this point, the Federal Reserve Board began charting its own restrictive monetary course with monetary restraint to counter the Congress's and administration's overly stimulative budgets and apparent inability to choose among domestic and foreign priorities.

By the end of 1968, the Congress and the administration were pulling in the same direction, with increased restraint on spending and money. The result was the recession of 1969, which drove unemployment above 6 percent. The Nixon administration abandoned restraint in 1971 as a result of midterm Republican losses. The administration made a dramatic shift to a combined strategy of mandatory wage and price controls and a devalued dollar. It managed to drive unemployment below 5 percent by 1973 and to drive inflation down from 5.9 percent in 1970 to 4.3 percent in 1971 and 3.3 percent in 1972. With the lifting of controls, however, and emerging shortages in world-traded commodities, the inflation rate immediately rose to 6.2 percent in 1973. With the subsequent fourfold increase in petroleum prices, the inflation rate shot up to 11 percent in 1974.

The inflation and unemployment problems of the seventies were compounded by the fact that productivity slipped to an annual rate of increase of 2 percent early in the seventies and began registering negative rates toward the latter part of the decade. Aggressive monetary and fiscal restraint pushed the unemployment rate to 8.5 percent in 1975. Since 1975, a persistent restraint has fostered a series of recessions and persistently high rates of unemployment, generally above 7 percent and reaching double digits in 1982. The net effect has been to drive inflation from double-digit levels to within striking range of the magical 3 percent in 1984. Projections suggest that the inflation rate will increase again toward 5 percent with the current recovery from the 1982 recession. Moreover, in order to maintain these low inflation rates, unemployment rates will be held above 8 percent until 1986 and will decline only slowly thereafter.

The Deteriorating Trade-off

The traditional means for reducing inflation has been to reduce overall resource utilization, thereby driving down demand for goods and services. Although one would hope reduced demand would reduce prices and wages directly, the immediate effect has been to reduce the quantity of goods and services produced and the number of people employed. Wages and prices do reduce eventually. The unemployed make less money. Those covered by unemployment insurance, for instance, have roughly 50 percent of their income replaced after being disemployed. The restraining effect of disemployment should be greater in the United States, as compared with other nations where income replacement and other benefits are higher—Japan (62 percent), Germany (66 percent), France (69-77 percent), and Sweden (69-77 percent). Eventually, persistent restraint and high unemployment will reduce the rate of increase in the wages of employees and also reduce prices.

The trade-off between unemployment and inflation, never a popular device, became even less popular after 1969, when the trade-off steepened considerably. In the 1953 to 1954 recession, for instance, unemployment for all workers increased from 2.9 percent to 5.5 percent, while inflation

declined from 2.2 percent to 0.5 percent. The effect on wage costs was even stronger. Overall wage increases for nonagricultural workers declined from a prerecession high of 8.9 percent in 1951, to 4.8 percent in 1952, 5.1 percent in 1953, and 1.2 percent in 1959. Moreover, wages of "preferred workers," white men aged forty-five to fifty-four, declined from a 5.5 percent rate of increase in 1953 to a 2.1 percent rate of increase in 1954, while unemployment among these same highest-wage workers doubled from 2 percent to 4 percent. In the 1957 to 1958 recession, there was a similar pattern, although slightly less inflation was bought with slightly less unemployment. In the 1960 to 1961 recession, mild restraint again brought mild wage reductions, but the pattern remained basically unchanged. Up to this point, the inflation-unemployment trade-off worked reasonably well.

Since 1969, however, increased unemployment yielded little in the way of wage reductions until 1982 or 1983, when sustained double-digit unemployment finally broke the upward wage spiral. All of the recessions after 1969 also started at much higher levels of unemployment and inflation. In the 1969 to 1971 recession, unemployment increased from 3.6 percent to 5.9 percent. Initially, inflation actually continued upward from 5.4 percent to 5.9 percent, but dropped to 3.3 percent in 1972. Wages for prime workers—white males, thirty-five to fifty-four years old—increased between 1969 and 1971 and fell only slightly in 1971. Overall wage increases performed similarly, increasing in 1970 and 1971 before declining only slightly in 1972.

Similar patterns persisted in the subsequent recession years of 1974 and 1980. Wages actually increased along with unemployment. Moreover, when wages eventually declined after a year or two of increasing unemployment, they either equaled or exceeded the inflation levels at the beginning of the recession (Vroman 1983). In short, the duration and extent of unemployment necessary to curb inflation was rising inexorably. In addition, restraint did not actually reduce the original inflation, it only halted its growth rate. Up until 1981, the rate of inflation at the begining of recessions was eventually incorporated in the "core" or underlying rate and became a permanent add-on to costs.

It has only been with persistent and aggressive restraint between 1979 and 1984 that we have actually been able to reduce inflation below its original level at the beginning of the restrained period. Between 1978 and 1983, annual unemployment rates increased from an annual average of 5.2 percent to an annual average of 9.6 percent. As a result of continuous and high levels of disemployment, the CPI first increased from 11.3 percent in 1979 to 13.5 percent in 1980, but declined to 10.4 percent in 1981, 6.1 percent in 1982, and is projected to be around 4 percent in 1983.

Wage increases of preferred workers first rose from an 8.2 percent rate of increase in 1979 to more than 10 percent in 1980, with only a slight (1 percent) increase in unemployment from 2.6 percent to 3.6 percent for these workers. With sustained restraint and another half percent increase in unemployment, wage increase declined to 8.1 percent in 1981. In 1981 and 1983, unemployment among preferred workers increased still further, to roughly 5.7 percent, and, according to an unpublished analysis by Vroman*, wage increases fell to 6 percent in 1982. Vroman's early analysis of 1983 suggests unemployment among preferred workers will increase only slightly, perhaps by 0.25 percent, bringing the rate up to a full 6 percent. At the same time, wage increases are likely to average only 3.5 percent to 4 percent.

In sum, between 1979 and 1984, overall unemployment increased from an annual average of 5.8 percent to 9.6 percent in 1982 and 1983, averaging 8.5 percent in the four years between 1980

*Personal interview of Wayne Vroman by the author, Washington, D.C., 1983.

and 1984. From 1979 through 1983, the CPI declined from an annual high of 13.5 percent in 1980 to under 5 percent in 1983. The questions that arise for policy decisions are therefore, as follow:

- Did the trade-off between unemployment and inflation account for the decline?
- If so, was the decline in prices worth the cost in unemployment?
- Having wrung inflationary expectations out of the economy, will the trade-off be quicker and cheaper in the future?

Some experts argue that declines in oil and food prices drove the inflation rate downward in conjunction with overall levels of unemployment. They conclude that much of the unemployment was unnecessary. In addition, they suggest that, in the absence of help from oil and food price declines, the rates of unemployment necessary to drive inflation to present levels would have been much higher. In short, these analysts believe the unemployment inflation trade-off is a bad bargain and, without assistance from deflationary shocks, will be a much worse bargain in the future. In addition, these analysts suggest that the basic structures that transmit inflationary shocks into the permanent price structure of the economy—the core rate of inflation—are still operating. Multiyear contracts and cost of living adjustments, for instance, have emerged from the period with relatively minor changes (Vroman 1983).

Monetarists and others argue, to the contrary, that a persistent monetary restraint has wrung the inflationary "expectation" out of the economy, with permanent effects on future inflation. Others argue further that "pattern bargaining" has begun to break down. Pattern bargaining is the device whereby employees adjust their wages according to wage changes in relevant reference groups. Hence, any wage increase is rapidly transmitted throughout the entire economy as all workers attempt to maintain their relative wage positions. To the extent that pattern bargaining is replaced by a more decentralized process that encourages wage increases consistent with productivity gains in individual establishments, the "transmission belt" for inflation, whatever its source, will have been substantially weakened.

The current debate over the sources of the current decline in inflation is of much more than academic interest. The resolution of that debate will determine the employment prospect over the next several years. Those who believe that a persistent monetary policy of restraint has lowered inflationary expectations and accounted for the current low rates of inflation (Feldstein 1983) will not want to change that policy suddenly in the interest of growth and employment. These protagonists in the inflation debate contend that a sudden surge of stimulus or loosening of monetary restraints will demonstrate to the public and financial community that the government and the Federal Reserve Board are unable to maintain the discipline of restraint. The result, they contend, will be a reinvigoration of self-fulfilling inflationary expectations. These policymakers and economists believe it will be necessary to keep unemployment between 7 percent and 8 percent for most of the decade.

Those who do not emphasize the role of expectations in the current inflation decline suggest that we need not maintain a persistent restraint. They suggest that a more aggressive recovery is possible with an immediate easing of monetary restraint and additional fiscal stimulus (Galbraith 1983). They contend that the current price behavior is the result of good luck in oil and food prices and a lot of unemployment. Without good luck in the future, unemployment necessary to fight inflation will be untenable (Alperovitz 1983). They argue that additional instruments will be required to maintain low levels of price inflation in the face of inevitable price shocks.

THE SOURCES OF "STAGFLATION"

Understandably, the persistence of "stagflation" has erupted into a spirited debate concerning the ultimate causes of inflation and the rate of unemployment that must be "tolerated" in order to stabilize inflation. Most economists agree that the lowest rate of unemployment attainable under existing institutional structures that will not result in accelerated inflation resides somewhere between 7 percent and 8 percent. Substantial disagreement exists as to the possibility for either current or alternative policies to alter current institutional structures in order to achieve a lower rate of unemployment without accelerating inflation. These disagreements are tied to alternative interpretations of past history and fundamentally different perspectives as to the institutional structure of the economy itself.

Overextension

One persistent theme in discussions of "stagflation" is the notion that the United States has attempted to deliver both full domestic employment and an expanding international presence. As a result, it is argued that we have stretched our resources too thinly and become vulnerable to domestic economic impediments to full employment and international events beyond our control. Those who hold the view that the United States is overextended suggest that the heterogeneity of the American work force, the influx of females and youths that began in the late seventies, the "implicit contracts" between labor and management—especially in unionized labor markets—our social "safety net," and other factors make it difficult and expensive to achieve full employment at home.

Compared with our foreign counterparts that have more homogeneous work forces, we are at a competitive disadvantage. As a result, more stimulus is required to arrive at low unemployment levels in the United States. Our domestic commitment to full employment, these protagonists argue, in combination with our expanding presence abroad, deprives us of the necessary discipline required to develop an anti-inflationary strategy and stick to it.

The first task of such a policy is to set domestic and foreign priorities, in recognition of the reality that we cannot be all things to all people. In addition, it is usually argued that our combined domestic and foreign ambitions have not only resulted in inflation at home and the requisite levels of unemployment to curb it, but in exportation of inflation into international money markets. The effect of the latter, "beggar-thy-neighbor" policy, it is claimed, has been the collapse of the international monetary system.

The Growth Imperative

Inflationary pressures do not necessarily become inflation. If the price of one item increases, the price of others, including human capital, can decline. Public or private consumption of either the inflated goods or some other goods or service can decline. Our inability to impose these adjustments results in inflation. Our inability to choose among domestic and foreign commitments

slows our response to inflation and, eventually, triggers inflationary expectations that exacerbate the problem and require more aggressive restraint when it is finally applied. The inability to choose among domestic commitments to full employment and foreign responsibilities results in repeated and somewhat "gimmicky" attempts to grow out of inflation. This is inherently difficult to do. Productivity growth has never averaged much better than 3 percent over any extended period since 1960.

Inflation rates have been far in excess of productivity performance. It is difficult to fight inflation with growth. Growth can have a much stronger effect on unemployment. Moreover, it is much more palatable than restraint from a political point of view. It is for this reason that the urge to fight unemployment and ameliorate inflation with growth has proven irresistible.

Political history has favored those who opted for growth strategies. The Truman and Eisenhower administrations were generally in favor of restraint. President Kennedy, however, was elected at least in part because of his pledge to "get the country moving again." Committed to full employment at home through a War on Poverty, and an object lesson for the world with a war in Vietnam, President Johnson ignored the inflationary impact of our overextended ambitions as had no other president in recent memory.

President Nixon attempted restraint in his first two years in office, but changed his mind when the Republicans fared badly in midterm congressional elections. His "growth fix," enacted to assure a second term, was to (1) devalue the dollar, making America's products cheaper abroad; (2) impose wage and price controls to hold off the mounting inflation; and (3) install Arthur Burns at the Federal Reserve Board to ensure a liberal flow of dollars.

With subsequent devaluations, we learned to maintain our domestic and foreign ambitions, in part, by exporting our inflation to our trading partners. President Ford's subsequent allegiance to restraint was interpreted as the principal cause of his defeat. President Carter's subsequent vacillation between growth and restraint and his admonitions to the American public to lower expectations proved at least partly responsible for his emasculated image and subsequent defeat. President Reagan, a conservative Republican, won with his own growth gimmick—"supply-side economics." Democrats, now the loyal opposition, are offering "industrial policy" for 1984.

Since the late sixties, the responsibility for restraint has resided more and more with an increasingly independent Federal Reserve Board. To a certain extent, the inflation issue has been taken away from elected officials who are unable to make choices between domestic and foreign priorities. Monetary restraint has political virtue. It allows national economic management through the manipulation of a single economic aggregate. As such, it preserves the therapeutic distance between public economic management and private production. In addition, because monetary restraint is applied homogeneously across the economy, it preserves a semblance of neutrality in its effects. Monetary restraint is, of course, not neutral in its effects. Monetary restraint immediately hurts interest-sensitive sectors, such as the automobile and construction industries.

There are many who favor shifting the inflation fight toward institutions (such as the Federal Reserve Board) that are less sensitive than others to political pressures. These protagonists point out that American political institutions are incapable of inflationary restraint. They argue that American politics are organized around pluralist interests for the purpose of distributing wealth. These institutions, they argue, are incapable of restraint.

This system of "interest group liberalism" is regarded by many as the cause of the persistent inflation that threatens America's "governability." In truth, the case seems overstated, given the

actual sources of inflation. Although special interests may be responsible for encouraging domestic overspending, they can hardly be faulted for episodic factors at the root of inflation, including wars and "supply-side" shocks in such commodities as food and oil.

The Structure of the Work Force

Classical economists assumed that prospective employees are homogeneous units of labor. Successive increments of growth will buy equal increments of employees at the same wages until full employment is reached. Of course, units of labor are not homogeneous. They are lined up in a hiring queue according to their skills and efficiency. As the economy expands, less productive workers are hired until the productivity of the remaining workers in the queue no longer justifies the entry wage, benefits, and the prospective costs of employer-provided training. Employers cannot hire these remaining workers at lower wages, because this will threaten the wages of the preferred workers already hired.

The resultant disruption will disrupt the "team work" among preferred workers and discourage preferred workers from providing informal, on-the-job training for subordinates for fear of losing their own jobs. The inflationary problem is exacerbated by the fact that once all the preferred workers are hired they may then bid for higher wages. They may do so in spite of the fact that there are many unemployed workers, because the unemployed workers are not effective substitutes for them.

Advocates of this "labor force structure" argument then point out that the influx of youths, females, and minorities into the labor market in the late sixties resulted in a substantial increase in the rate of unemployment necessary to maintain stable prices. Because these workers were relatively inexperienced and unskilled, they were supposed to be poor substitutes for preferred workers. In addition, these workers were supposed to experience frequent bouts of unemployment and reentry as they moved between school, work, and home. Moreover, younger workers and females were less likely to hold on to jobs because they could avail themselves of income support from husbands or parents.

As a result, the queue of unemployed workers increased as their number increased in the sixties and seventies. The noninflationary unemployment rate also increased. Most of these workers earned low wages. As a result, more of them had to be disemployed to reduce overall wage costs and to threaten high-wage workers. It required more unemployment to maintain stable prices. Correspondingly, more stimulus was required to increase employment. These relatively untrained and inexperienced workers achieved relatively low productivity rates. Profits and sales volume had to increase considerably to justify their wages. Consequently, more stimulus per job created was necessary.

In sum, as a result of changes in the structure of the labor force, the employment generating power of stimulus and the anti-inflationary power of unemployment were simultaneously reduced. Perry (1970) estimates that a given unemployment rate in 1970 would have to be associated with an inflation rate of 1.7 percent higher than the same unemployment rate in 1950. Wachter (1976) suggests that the NAIRU was probably 4 percent between 1950 and 1962, but increased to 5.5 percent in 1974, largely as a result of these factors.

Arguments that blame labor force structure for the steepening trade-off between unemployment and inflation and declining productivity (Dennison 1979) are overstated. Demographically adjusted rates calculated by Perry (1970; 1977), Wachter (1976) and Flaim (1979)

suffer from partial analysis. These analyses ignore the fact that the educational attainment of women and youths has increased over the past few decades. In addition, their relative education levels have improved dramatically (Levitan and Taggert 1976).

Improved transportation, communications, and the acceptance—forced and otherwise—of women and young people in the workplace are all trends that suggest lower, not higher, unemployment rates and greater, not lesser, productivity. Arguments that suggest that women and young people feel free to enter, quit, and reenter labor markets because they have alternative means of support ignore the fact that substantial numbers of young people, especially females, are family heads or contribute significantly to family income.

Moreover, such arguments ignore the increasing cultural importance of work, especially to youths and females. Their labor market participation is not as casual as it once was. Finally, at least part of the adjustment to the rapid influx of youths and females was absorbed by lowering their wages rather than reducing their employment. In the sixties and seventies, wages of young males, young females, and all females dropped relative to the wages of males in the forty-five- to fifty-four-year age group—the age group in which primary workers are concentrated.

One final anecdotal argument demonstrates the same point. In February of 1969, the United States unemployment rate fell to 3.3 percent of the labor force. Six years later, in February of 1975, the unemployment rate was 8.2 percent of the labor force. Over that period, sixteen- to nineteen-year-olds had increased from 7.5 percent to 9 percent as a proportion of the labor force, and women had increased from 37 percent to 40 percent of the labor force. These demographic shifts hardly account for a doubling of the unemployment rate over a six-year span.

Available estimates vary as to how much of the twofold increase in the NAIRU from 4 percent in the mid-sixties to 8 percent in the early eighties may be explained by the composition of the labor force. Wachter's (1976) estimate that demography would add 1.5 percent to the unemployment rate by 1974 is at the high end. It does not account for the education and other characteristics of youths and females mentioned earlier. The most articulate attempt at separating these factors comes from Sawhill (1983b), who concludes that roughly half a point can be attributed to compositional shifts in the labor force, per se. All economists agree that the impact of demography passed its peak in the mid-seventies and will continue to decline as the baby-boom cohort ages and female labor force participation increases at a reduced pace.

The Structure of Labor Markets

Many believe that the deteriorating trade-off between inflation and unemployment derives from the structure of labor markets. Unemployment insurance, welfare, and other elements of the "safety net" for the unemployed, it is argued, encourage job leaving. The availability of the social "safety net" does make unemployment less painful. That is its purpose. At the same time, the American net is pegged well below that of our trading partners in Europe and Japan. In addition, job leavers are a relatively small proportion of all the unemployed. In most cases, slightly less than half the unemployed are new entrants or reentrants to the labor market and 60 percent or so have been employed just prior to unemployment. About a quarter of those who were employed just prior to unemployment, or roughly 15 percent of all the unemployed, are job leavers. The remainder are job losers.

Even if all the job leavers are encouraged to do so by the availability of unemployment insurance, they will still account for a relatively small share of any given unemployment rate. Since

many job leavers probably do so because of disability, family moves, or an inability to cope on the job, it is doubtful that many are lured away by the promise of unemployment insurance. Nor is it likely that many leave one job voluntarily to search for a new job. It is fairly standard "street" wisdom that the best way to find a job is to look when you already have one. What little evidence there is suggests that the safety net may increase the duration of unemployment slightly, with no appreciable effect on the unemployment rate.

Finally, there are counteravailing tendencies. For instance, the increasing availability of welfare, disability, and other income transfers will logically keep the lowest-income earners and least able out of the work force altogether. Since these groups have high unemployment rates, it is arguable that these programs may reduce—not increase—overall unemployment. In sum, whereas Feldstein (1983) and others suggest these factors could account for as much as 1 percent of the increase in the NAIRU since the mid-sixties, most observers suggest that they account for 0.5 percent, at the very most. Available analyses seem to weigh in favor of the view that little if any of the alleged increase of the NAIRU has been credibly explained in terms of the labor market itself (Tobbin 1980).

The Structure of Jobs

Job structure can affect the trade-off between unemployment and inflation in various ways. Since jobs in the "secondary" labor market are unattractive, people confined to those jobs may quit more frequently—one dishwashing job is as good as another—and there are lots of such jobs available. Employers do not invest in either finding or training workers for bad jobs—one employee is as good as another—and have no good reason to minimize layoffs whenever business conditions deteriorate. The question, however, is whether the number of these jobs has increased sufficiently since the mid-sixties to explain a doubling of the NAIRU from 4 percent to 8 percent. Some evidence exists to the effect that relatively low-wage jobs are increasing as a proportion of all jobs (Bluestone and Harrison 1982; Stanback 1979). At the same time, however, since females and youths are concentrated in these jobs (since the mid-sixties), the effect of secondary labor markets on the NAIRU since that time is probably explained by the demographic estimates mentioned earlier.

A second effect on the increasing NAIRU that derives from the structure of jobs may stem from the effect of primary markets on inflation. Primary jobs are characterized by substantial employer investments in training, high employee wages, benefits, a nonportable pension, and so forth. Wages represent an implicit commitment between employer and employee (Okun 1981). In addition, wages are determined relative to other reference groups in a complex pattern of mutual adjustments. Rapid wage declines, even in the face of aggressive restraint, disrupt the "teamwork" critical to productivity and skill transfer (Thurow 1983). To the extent these primary workers and the establishments that employ them resist demand or monetary restraint, they will encourage higher rates of unemployment among secondary workers and a more persistent inflation.

Specifying the actual number of primary jobs is difficult. It is also difficult to say whether the number of such jobs has increased or declined since the mid-sixties. For example, good manufacturing jobs have declined very slightly as a proportion of all jobs, whereas the proportion of white-collar jobs has increased dramatically. Indeed, in this case it may not matter whether the proportion of primary jobs has increased or declined. What may matter is that there is a significant proportion of jobs in the American economy in both organized and unorganized settings where employees may expect to maintain their real incomes and even increase them at some historical rate, even in the face of mounting inflation.

These jobs are probably the principal "transmission belt" for both past and expected inflation. The existence of these jobs forces higher rates of unemployment—usually in other job sectors—in order to deter greater inflation. Many of the unemployed may be hostages to the real-wage increases demanded and realized by these preferred workers. Moreover, in a job structure where wage levels are determined by a complex sense of relative worth, and in product markets where prices are determined more by costs than overall demand, any increase in wages among primary workers reverberates through the economy until everybody's relative position is reestablished.

Expectations

The underlying rate of inflation in wages and prices has always been sensitive to past inflation. It is understandable that employees will attempt to recoup inflation that has already occurred in their wages and that employers will adjust their prices to reflect inflated costs. This seems to be the way in which inflation interacted with wages and prices in the fifties and sixties. As the inflation rate persisted and grew above 3 percent in the mid-sixties, the public became sensitized to future inflation. Wages and prices began adjusting not only for past inflation, but for inflation expected in the future as well. To adjust wages and prices for expected inflation is, of course, a self-fulfilling prophecy.

Evidence of the impact of expectations is difficult to establish. Price feedback effects in wage equations have grown persistently until 1983. More anecdotal evidence comes from the growth in cost-of-living-allowance clauses (COLAs) in wage agreements since the late sixties. Although these affect less than 10 percent of the total work force, they affect many more workers who bargain collectively. COLAs are now included in 54 percent of "major" bargaining agreements (i.e., agreements covering a thousand workers or more) covering a total of 10 million workers, compared to 21 percent of such agreements in 1968. In addition, since 1968, COLAs have accounted for roughly 30 percent of total wage increases in such agreements, compared with only 5 percent in 1969 (Vroman 1983).

In sum, neither the structure of the work force nor the structure of labor markets explains the lion's share in the increase in the NAIRU since the mid-sixties. Of the twofold increase from 4 percent to 8 percent, these factors account for as little as 1 percent and certainly no more than 2 percent. Moreover, demographic trends, a likely leveling off in the labor force participation of females, and increased experience among the young and female entrants into the labor force in the sixties all suggest that the component of the NAIRU associated with work force composition will decline steadily. These trends will be offset to some extent by the increased proportion of minority and poor youths in the youth labor market, but certainly not completely.

Females, young people, and others at the far end of the hiring queue are hard to employ because they are viewed as poor substitutes for preferred workers—white males twenty-five to forty-four years old. The difference between these less-preferred workers and preferred workers is their lack of experience and relatively low levels of "human capital*." If these people (who stand somewhere below 6 percent in the hiring queue) are to become employable, human capital investments will be required. Whereas jobs are unlikely to be available for these workers until the overall unemployment rate is driven below 6 percent, human capital development targeted on this portion of the hiring queue should be in place long before the unemployment rate reaches 6 percent, as developmental programs may take substantial time to bring desired results.

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*Human capital refers to the human resource contribution to the economy (as opposed to that of physical capital). In reference to the individual, human capital is synonomous with marketable skills

Even when the unemployment rate persists above the 6 percent level, the most extensive training and development programs should be reserved for this population possessing the most permanent human capital deficits. Less extensive labor market policies are most effective for the more transitory problems of individuals who stand in the hiring queue above 6 percent. Alternatively stated, policies that alter the quality of the labor supply should be targeted on those who occupy the range in the hiring queue below 6 percent unemployment, and policies to increase the demand for additional hiring should be reserved for those who occupy the range in the hiring queue above 6 percent unemployment.

Wars, Shocks, and Sectoral Inflation

Characteristics of the labor force and labor markets account for an increase in the NAIRU to at least 5 percent (and certainly no more than 6 percent) since the mid-sixties. The structure of labor markets and the job structure do provide a "transmission belt" for inflation. Since wages represent two-thirds or more of all output, attempts are made by employees to recoup past inflation in their wages. When inflation persists above some noticeable level, they are also likely to incorporate expected inflation into their wage and salary demands. It is through the wage mechanism that even brief episodes of inflation become permanently incorporated into wage and salary costs and add to the "core" or underlying rate of inflation. The root causes of the dominant share of our inflation, however, lie elsewhere.

One need not look far for these root causes. They are the effects of war—hot and cold—natural price shocks in food and other commodities, and artificial price shocks in oil. Our attempt to fight wars and maintain civilian production has led to much of the overspending or "excess demand" inflation in the post-war period. The effects of the Vietnam conflict were especially destructive after the mid-sixties. Wars, themselves, are expensive and inflationary. The CPI was 7 percent from 1940 to 1941 (during World War II), 5 percent between 1950 and 1952 (during the Korean War), and 5.5 percent from 1965 to the end of 1974 (during the Vietnam War).

The inflationary momentum bottled up in wartime by war bonds, wage-price controls, the moral force of wage-price guidelines (except in unpopular wars), the natural surge of private consumer demand, and the transition from wartime to peacetime production extend the effects of wartime inflation into peacetime economies. Inflation persisted near 8 percent in 1947 and 1948 (after World War II). The post-Korean conflict inflation was mild by comparison, but the post Vietnam inflationary momentum combined with other price shocks from world-traded commodities to produce double-digit price increases in the seventies.

The effects of war on prices also derive from the fact that they encourage unbalanced growth (Holt 1970; Tobbin 1972). Rapid growth, especially in durable manufactured goods, creates bottlenecks in both defense and civilian production and encourages inflated wages and prices. The effects of imbalanced growth were most destructive during the Vietnam era. Defense outlays for Vietnam and for durable manufactured goods expanded rapidly after July of 1965, just as the economy reached 4 percent unemployment, the full employment target. The collision between consumer demands for "big ticket" durables and war production produced a dramatic spurt in inflation led by manufactured durables. Although the evidence is not in, the current surge in defense production may demonstrate similar effects.

Commodity shocks, in combination with the inflationary momentum, were the principal roots of the unprecedented inflation of the 1970s. The mismanagement of domestic food supplies (Okun 1976) in 1973, increasing prices of world commodities, and the Arab oil price explosion in 1974

(and again in 1978 to 1979) were the major sources of inflationary pressures in the seventies and early eighties.

Inflation may also stem from specific economic sectors in the domestic economy. Unbalanced growth as a result of surge production may occur in consumer as well as war production. Sectoral pressures in consumer durables were the root cause of inflation in the late fifties. Health care and housing construction have been persistent sources of inflation in the sixties, seventies, and eighties.

The Price of Restraint

Considerable evidence exists that prolonged economic restraint can appreciably effect the unemployment-inflation tradition. Recessions and lengthy periods during which the economy operates below capacity may reduce overall economic capacity. The skills of unemployed or underemployed workers become rusty during slack periods. During such periods, there is little incentive to invest in either human or machine capital. Why make human or machine investments in order to increase output when inventories are already stacking up and buying is down?

In a business environment with simultaneous inflation and reduced sales, the only reason to invest in machinery or people is to increase output per person in order to reduce costs, not to increase overall output. If the employer can produce the same overall output with fewer workers, the size of the firm's work force can be reduced by attrition or layoffs. As a result, the only investment that occurs will be in the interest of reducing the number of jobs available, not in the interest of expanded output and employment.

The negative effects of restraint on investments may have been especially destructive during the sixties and seventies, when an influx of baby boom workers and females into the labor market required increased investment spending to maintain human capital and to maintain the ratio of machine capital to labor. Moreover, the rapid increase in oil prices may have reduced the productivity of much of our oil-based machine capital (Bailey 1981) and required substantial reinvestment to reconfigure the relationships between capital and labor in the workplace. In addition, tax incentives based on the initial costs of capital did not compensate employers for the replacement cost of capital.

Whereas the quality of time-series data does not allow an estimation of the trend in the overall investment in human capital per employee by employers, we do know that capital-labor ratios declined substantially in the sixties and seventies. In addition, much of the investment in new technology has been in the interest of reducing inflated wage costs rather than in increased output. Capacity utilization rates provide further evidence of this effect. At 86 percent of capacity, the United States achieved an unemployment rate of 4 percent in 1956. The same capacity utilization resulted in a 5.8 percent unemployment rate in 1979 (Sawhill 1983a). These shifts suggest that the actual productive capacity of the nation's human and physical infrastructure may be declining, allowing less employment at the same measured rates of capacity utilization. An analysis of capacity utilization by Sawhill (1983b) concludes:

> While this issue has received much less attention in the literature than changes in the structure of the labor market, on the surface it appears to be at least as important a reason for the increase in the NAIRU. It is possible that the NAIRU has increased by several percentage points since the mid-1950s as a result of this factor. The possibility of a vicious circle can again be raised: maintaining economic slack to curb inflation may also reduce investment and thereby raise the NAIRU still further. (p. 36)

"Stagflation": The Policy Debate

Historically, anti-inflationary restraint has gravitated toward the Federal Reserve Board, whereas strategies designed to end economic stagnation have been left to elected officials. This division of labor as a matter of political convenience has often been internally inconsistent. Supply-side tax cuts or any other investment or employment incentives do not operate well when restrictive monetary policies raise interest rates and suppress economic activity (Evans 1983). The most telling criticism of current policies, however, is that they are a bad bargain. Their negative economic effects outweigh their benefits.

Economywide stimulus in a world characterized by episodic wars and supply-side price shocks seems to weaken the more it is used. Persistent stimulus generates more and more inflation and less growth and employment. Moreover, there appears to be a breaking point in the inflation process where expectations of further inflation are permanently incorporated into wages and prices. At that point, future inflation gathers a momentum of its own and becomes a runaway spiral that can be stopped only by government restrictions on economic activity. Anti-inflationary restraints are made painful and persistent in order to "demonstrate" to employees and the business community that their inflationary expectations are unrealistic in the face of governmental discipline that will be imposed, irrespective of its cost in disemployment and lost output.

Anti-inflationary policies appear to be an equally bad bargain. Given the fact that price restraint is technically difficult and that wages represent two-thirds of economic activity, wage restraint is the traditional target of anti-inflationary strategies. This fact results in an unfair bias against earned income as opposed to passive income from capital. Because restraint tends to affect the quantity of labor more than its price, the costs of restraint in unemployment are high. In order to reduce wage inflation by one-third to one-half of a single percentage point, 1 million people must remain unemployed for a full year. This same degree of restraint will cost an additional two and one-half percentage points in lost economic output each year.

In order, for instance, for the present administration to drive inflation down to 4 percent, lost output will add up to roughly $600-700 billion, one-fifth of an annual gross national product (GNP) total, or roughly $9,000 per American family (Bator 1982). Unemployment has to be sustained at 8 percent to 10 percent over the same period. In addition, this unemployment is highly concentrated among low-income, minority, and female populations, resulting in an unfair distribution of the burden of restraint. Moreover, persistent restraint reduces growth investments in human and machine capital, discouraging future output and employment. The same forces slow American adaption in a rapidly changing international economy. Investments that do occur in such an environment appear to be made in the interest of cutting wage bills in individual firms by substituting cheaper technology for employees, resulting in further unemployment.

Micropolicy versus Macropolicy

Most writers agree that current practices are a bad bargain, but the debate over alternatives is bogged down with ideological, theoretical, and practical disagreements. Protagonists may be separated into those who favor more articulate policies and those who favor continuing with traditional approaches. Those who favor continuing with the traditional strategy of economywide restraint to fight inflation and economywide stimulus to foster growth find these approaches attractive, in no small part, for their political virtue. The manipulation of economic aggregates minimizes direct public interference in private production.

These policies preserve the current distribution of public and private power. In addition, these protagonists contend that public interventions favor only large, established interests and disserve new economic institutions or unorganized employees. They suggest that more direct policies add an additional element of institutional resistance to economic change and inspire protectionist policies when, instead, the "creative destruction" of the marketplace should be allowed to force adaptations.

This viewpoint finds political support on both the right and left. Libertarians and leftists both decry any shift in the current economic and political structures that enlist the combined power of big business, big labor, and big government. Both left and right agree that the economy has been unresponsive to traditional policies. Both advocate institutional changes that encourage responsiveness. It is at this point, however, that their common paths separate into the more recognizable patterns of left- and right-wing politics.

Their proposed remedies to encourage responsiveness are quite different. The radical conservatives favor policies that will make the economy more responsive to the manipulation of economic aggregates in the interest of growth or restraint. They propose to make both stimulus and restraint a better bargain through "market liberalization." Market liberalization requires the removal of institutional and legal restraints on the operation of the free market. The left favors making the economy more responsive in exactly the opposite fashion. They want to encourage more control over economic decisions through a strengthening of pluralist political institutions. On the left, there is also a general consensus in favor of a reduced emphasis on growth and popular control of economic institutions (Bowles, Gordon, and Weisskopf 1983; Wolfe 1981).

The radical conservatives propose to reduce the role of government in the economic and social life of the nation. Their most successful advocate is theoretician Milton Friedman. Friedman has had the temerity to take on Keynes and his assumption directly. Keynes argued, for instance, that increased income increases savings in the economy over time and requires the government to increase its own spending to make up for the private spending siphoned into savings. Friedman counters with his "permanent income" hypothesis, which argues that the overall savings rate does not rise with income; hence, there is no need for a growing government share of GNP.

Friedman has also resurrected the classical notion that relatively high rates of unemployment are a "natural" phenomenon in capitalist societies. Each society, Friedman argues, has a "natural rate of unemployment" given its institutional structure, the structure of labor markets, and the structure of its work force. Any attempt to drive inflation below that rate may increase employment in the short term but will be dissipated in the longer term. Since governments cannot maintain full or high employment, Friedman implies, they should not try.

Protagonists in the policy debate also disagree as to how the economy actually works. The traditionalists tend to assume an economic system that is complex, but that responds flexibly to broad economic policy signals. Nontraditionalists on the left and right see an economic system fraught with institutional rigidities that weaken the effects of economywide policies of restraint and stimulus. Here, again, left and right part company. On the right, stern arguments emerge for reestablishing free markets by removing the institutional impediments to them. To the left of the traditionalist center lies the view that current economic institutions largely reflect the natural development of modern economies and the pluralistic distribution of political and economic power within the nation.

In short, the current institutional reality is here to stay. Unionization, regulation, oligopoly, power in large corporations, multinationals, minimum wages, and other forms of labor market

regulation and other institutional realities need to be incorporated into our understanding of the workings of the economy and factored into our policies for economic management. These protagonists also tend to agree that broad macroeconomic policies are incapable of effectively leveraging the complex institutional reality of modern economies. These analysts and policymakers favor a mix of broad macroeconomic policy with more articulate microeconomic policies which, they argue, are capable of achieving economic goals more directly and efficiently. With the appropriate mix of policies, they argue, the unemployment-inflation trade-off will be improved greatly.

The distinction between "institutionalists" or microeconomists and the more traditional macroeconomic view results in a persistent schism among economists and policymakers. Differences arise in methodology, problem statements, and remedies proposed. Given their view that economic problems may only be understood in the context of complex institutional behavior, microeconomists tend to be more behavioral and inductive in their analysis of economic problems. They draw on a broader array of intellectual disciplines including sociology and political science in explaining economic problems.

Macroeconomists tend to be more deductive, drawing their problem analysis from elegant theoretical models and macroeconomic simulations. It is their view that the sheer volume of economic decisions nets out erratic institutional behavior and other anomolies. They conclude that the long-term trends captured in their equations are the best predictors of future economic states and the appropriate points of leverage for economic policies. The microeconomists counter with the argument that it is too difficult, time consuming, and inefficient to influence broad trends in economic performance—that it takes too much unemployment to slow inflationary momentum. As a result, they opt for more direct and targeted approaches.

Microeconomic Response to Inflation

According to microeconomists, the traditionalist view of "stagflation" is seriously flawed. Traditionalists tend to view inflation as a single, monolithic force to be attacked exclusively through wage restraint. In fact, they argue, inflation is not monolithic. At its roots, it is driven mostly by the episodic calamities of war and supply-side price shocks in food and energy and sectoral inflation from health care and housing. To attack inflation through wage restraints exclusively is to attempt to rely on restraints after episodic and sectoral sources of inflation have already become part of the wage and price structure of the economy. Such a single-minded strategy ignores the causes of inflation as policy targets in favor of their effects. It confronts the inflationary process at its destination and not at its source.

An exclusive reliance on macroeconomic stimulus to provide for full employment does limit full employment to the point at which further macroeconomic stimulus becomes inflationary. Currently, that unemployment rate hovers around 8 percent. Such a stratagem also tends to treat the unemployed as a monolithic population. Many of the unemployed cannot find work because the economy is operating below capacity. In the current hiring queue, these are the unemployed above 8 percent who are waiting for the economic cycle to take them in turn. Those standing in the hiring queue between 8 percent and 6 percent are "structurally unemployed," but not in the traditional sense. They do not lack skills or job preparation. Instead, they are unemployed because the economy seems incapable of operating at levels that will absorb them without generating inflation. Supply-side strategies to provide these workers with additional human capital are generally unnecessary. Overall economic expansion is the best employment strategy for those in the hiring queue above 6 percent.

Those in the hiring queue below the 6 percent unemployment range do not exhibit homogeneous human capital problems, either. Indeed, to some extent their problem is not human capital deficiencies at all, but a general underinvestment in plants and equipment inspired by long-standing anti-inflationary restraint that limits the economy's overall capacity to operate at unemployment levels below 6 percent.

Human capital problems at the far end of the hiring queue vary in extent and kind. A more careful analysis reveals that they are made up of (1) individuals who possess serious human capital deficiencies; (2) new labor-market entrants who are job-ready or ready for employer training but inexperienced; (3) older, dislocated workers with good skills and experience; and (4) other populations with specific labor market handicaps. Both supply-and demand-side policies tailored to eliminate or minimize these various handicaps among the unemployed may lower the NAIRU and reduce unemployment.

The appropriate remedy for "stagflation" is most likely a complementary mix of macroeconomic and microeconomic policies in a simultaneous assault on inflation and unemployment. Macroeconomic policies should be single-minded. They should either encourage employment or discourage inflation, according to the prevalent economic condition. Macropolicy goals should be clear, especially if major macropolicy goals include others beyond "stagflation." Both the monetary and fiscal aspects of macropolicy should be pulling in the same direction.

Microeconomic policies of various kinds can fill the gap between macropolicy and "stagflation" policy targets. Microeconomic policies are appropriate in pursuit of both price stability and full employment. Sectoral policies for energy, food, health care, and housing may be worth a try. Some form of microeconomic policy for wage restraint warrants experimentation. Microeconomic employment and training policies could include demand-oriented devices, such as wage subsidies for those with transitory employment problems and more intensive human capital development for those at the far end of the hiring queue.

Any mix of macropolicies and micropolicies should include some that are persistently in place, as well as a set of ad hoc policies at the ready for inflationary emergencies. Ad hoc policies would need to be available to break inflationary momentum. These flexible and discretionary devices, including wage-price controls, would need to be employed only when the inflationary "horse was out of the barn." They would be most useful in response to dramatic price shocks and other episodic sources of inflation largely out of the ambit of our social control. They would be responsive to the accelerating persistence of warfare and natural calamities. It is hoped that the former will be discouraged by diplomacy. Natural calamities so prevalent in the seventies were virtually non-existent over the prior twenty years (Sawhill 1983b). Thus, with diplomacy and good luck, we may avoid these calamities in the future. At the same time we could reduce our vulnerability by having a set of ad hoc policies at the ready.

The Limits to Macroeconomic Policy

The fundamental limit to the utilization of increased macroeconomic stimulus is that point in the resultant expansion where inflation begins to accelerate and build a momentum of its own. This process has been evident since the late sixties and virulent since the mid-seventies. The limit to macroeconomic restraint is the point in a continued course of restraint where a deflationary spiral begins to take on a momentum its own. The latter is a happy problem. The remedy is more spending to halt deflating prices and encourage employment.

This difficulty has not reappeared since the Great Depression and is unlikely to appear any time soon. The world seems to have shifted irrevocably from its deflationary biases of the thirties and forties to an economic environment characterized by persistent and episodic inflationary pressures. The more recent limit to restraint is not its deflationary impact, but rather the tendency for current policies to be painful, unfair, and destructive of long-term growth possibilities and the rate of economic adaption in a rapidly changing world economy.

There are other limits to macroeconomic policies. In an inflationary environment, macroeconomic stimulus must be braked at some point before the NAIRU is reached to avoid the possibility that the momentum of the stimulus will not overshoot the NAIRU and result in undue inflation. Similarly, restraint needs to be moderated lest its momentum result in undue unemployment. The task for macroeconomic policies is to moderate recessions and speed recoveries. The actual amount of stimulus or restraint should not be geared to the absolute gap between the actual level of demand and the level required at full employment or the level required to attain stable prices. For these reasons, microeconomic policies need to be applied prior to the attainment of full employment or stable prices.

The full use of macroeconomic instruments is complicated further by the reality that our fiscal and monetary interests serve purposes other than overall economic stabilization. A favorable balance of payments and the strength of the dollar are goals in and of themselves. Moreover, the goals of diplomacy and the realpolitik of world affairs often require economic commitments independent of their inflationary or employment consequences. Balanced budgets are often pursued independently of their economic consequences.

The level of government spending is also disciplined by the political consensus as to the appropriate size of government relative to the size of the private economy. In addition, public spending is undertaken for specific purposes. Obtaining agreement for additional spending on worthwhile public goals inhibits expansion, just as difficult decisions to curb or eliminate spending for previously agreed-upon public purposes limit our ability to enforce restraint.

Monetary policy also serves conflicting goals. Because of its impact on interest rates, monetary restraint harms economic sectors and regions that specialize in consumer durables. The implicit national commitment to provide owner-occupied housing for all families is also violated with persistent monetary restraint. Monetary policies also have to be mindful of their effect on public debt and the value of government bonds in order to maintain public trust in financial markets. Moreover, the ability of the Federal Reserve Board to control or even define money has been severely reduced during the postwar era. The increase in available consumer and producer sources of credit, new banking practices, and the internationalization of capital markets has made it increasingly difficult for the Federal Reserve Board either to set or meet monetary targets.

Perhaps the most serious impediment to the full utilization of macro-economic restraint stems from the new sensitivity to expectations. It is argued that, in order to dampen expectations of future inflation and the general view that governments are incapable of making the hard priority choices necessary to cope with inflation, the government must demonstrate a disciplined restraint in spite of its economic consequences. The intention to stop inflation, whatever the cost, can only affect expectations if it is announced and then demonstrated in the face of even the most overwhelming suffering and political pressure. As such, macroeconomic restraint becomes a test of will and not an economic policy.

This practice, vaguely reminiscent of primitive rituals of sacrifice and purgation, could be made more rational and perhaps avoided with a system of microeconomic policies firmly in place.

Such a system of policies would put the nation on notice that "tail-chasing" wage and price increases will be fruitless if all or a part of them are penalized and recaptured by the government. In addition, such a system would ensure that the pain of restraint would be relatively equally shared. The current environment is ideal for imposing such policies.

With inflation low, the policy process can extract negotiated agreements at a time when costs to individual groups is least. At the same time, political pressures for anti-inflationarey policies are least when inflation is lowest. Unfortunately, policies are rarely considered until the white heat of economic necessity forces them on the American system. In addition, with the Federal Reserve Board apparently willing to absorb the political animosity that comes with restraint, popular institutions have little incentive to tackle the problem. The missing ingredient in the current policy mix is leadership.

Microeconomic Policies to Fight Inflation

Once past inflation has been transmitted into wages, policies of wage restraint are unavoidable. If future expectations of inflation begin to influence wage bargaining, even more aggressive restraint is required. In the sixties and seventies, wage increases persisted in spite of monetary and fiscal signals that emphasized restraint. The unresponsiveness to restraint of wages and prices is explained in the existence of relationships between buyers and sellers and employees and employers that moderate the effect of market conditions on wages and prices.

Wages and prices appear to adjust in the short term according to "implicit contracts" between buyers and sellers and commonly held standards of a fair price and a fair wage. Sudden changes in prices and wages are likely to be perceived as violating a trust relationship between employers and their workers and customers. Thus, sudden increase in prices or reductions in wages may lose customers and reduce "team productivity." Sudden price reductions are not likely to increase market shares dramatically, as many consumers will remain loyal to familiar brands. Sudden increases in wages are not likely to increase work effort because they will increase costs without dramatically increasing the employees' commitment to the firm.

Wage reductions are the more difficult because of the manner in which "fair" wages are determined. In labor markets, a fair wage is likely to be judged according to some relative standard. Employees judge their own wages by comparison with other groups with similar backgrounds, education levels, experiences, professional or occupational training, and according to wages for similar work in the same or a similar industry. For all these reasons, downward wage adjustments are difficult and slow.

In the short term, aggressive monetary and fiscal restraint are therefore more likely to affect the quantity of labor employed than the price of labor. Moreover, when wage adjustments occur, they must maintain the relative positions of affected workers. Wage adjustments that affect only specific groups of workers may occur only when other workers believe that the wages of those workers are excessive relative to theirs. This appears to be the case with federal government employees and auto- and steelworkers at the present time. The challenge for economic policy is to stop inflation before it finds its way into wages and prices and to make wages and prices more responsive to policy signals—that is, to "amplify" the policy signals. The recent record suggests that macroeconomic signals need to be supplemented with micropolicies.

One strategy favored by conservatives is to eliminate the institutional obstructions to wage restraint and price restraint. Deregulation, an aspect of such policies, may reduce price levels in

specific sectors but has little effect on the process that drives wage increases. In addition, deregulation may eliminate rules whose effects are generally agreed to for noneconomic reasons. Antipollution rules, for instance, are expensive but are generally supported by the public. Even double-digit unemployment, however, has failed to "crack" the pattern of collective bargaining.

In fact, the structure of wages and prices and the institutional practices that undergird them probably reflect the complex reality and distribution of political authority in an advanced industrial economy. By continuing such strategies indefinitely, we threaten to crack the complex web of social arrangements that keeps this diverse racial, ethnic, religious, and geographic society glued together. This is especially the case when the effect of a generalized restraint is highly and unfairly concentrated on blacks, minorities, and females.

Advocates of microeconomic supplements to macroeconomic restraint generally advocate "income policies." These range from wage-price guidelines to tax incentives to mandatory wage-price controls. Wage-price guidelines did not prove effective when they were implemented in the seventies. Even if they had worked, their effectiveness would have been reduced by virtue of the fact that guidelines allowed relatively high wage and price increases. Some writers have suggested that a system of incentives would improve the operation of guidelines. Tax incentive plans (TIPs) are most popular. A TIP would reward with a tax credit those workers whose wage increases met or were less than guidelines.

Although a TIP scheme was proposed by the Carter administration, it has never been attempted. Critics point out that credits sizeable enough to encourage compliance would be inflationary in themselves. In addition, these schemes would add one more entitlement to the federal budget. Advocates point out that TIPs would encourage equity in wage restraint, since both primary and secondary workers would be covered. Moreover, tax credits would address the inequity imposed on employees where wages are more often restrained than prices, because wage restraints are technically more feasible. In addition, advocates contend that the costs of the program would encourage the government to pursue anti-inflationary restraint with macroeconomic and other microeconomic policies to avoid triggering a TIP program.

Mandatory wage-price policies have few friends. The rapid increase in wages and prices that occurred when mandatory controls were lifted in the early seventies suggests that unless the public believes the government is going to address the basic causes of inflation, mandatory controls can keep the inflationary "genie in the bottle" for only so long. In addition, one does not have to be a romantic about "free markets" to realize that prolonged mandatory controls will distort resource allocations normally performed by variations in the price system. Moreover, mandatory controls in sectors that rely on basic materials, such as food and oil, can reduce output only when these prices rise. Problems in these markets require sectoral approaches that address fundamental supply problems.

Advocates of mandatory wage-price controls, notably Bosworth (1982), suggest that temporary restraint may reduce the initial effect of price shocks and allow some time to address price shocks at their source. These programs should (1) never run more than three years; (2) abrogate existing multiyear price or wage agreements; (3) exclude products in auction markets where demand and supply are clearly driven prices; and (4) track prices only where measurement is technically feasible, given the technical difficulty in tracking price changes.

A host of options beyond wage-price controls deserve more attention and consideration. Solow (1976) suggests that sudden price surges could be curtailed with increases in excise taxes.

Increased excises would reduce sales and encourage general restraint in an overheated economy. In addition, when inflation results from unbalanced expansion, excise taxes may be levied against the offending economic sectors. Sectoral policies make sense in light of the history of American inflation. Virtually all of our inflation has been sectoral, emanating from defense production, food, energy and other commodities, health care, and housing. Sectoral policies in each of these areas and in any others that became inflation prone and that focused on basic supply and demand problems would greatly reduce American exposure to episodic shocks.

Our information system for tracking wages and, especially, prices needs improvement if we are to allow ourselves greater lead time to fashion usable policies. Changes in labor-management relations may also be helpful. Annual wage contracts could be encouraged in order to encourage a bargaining environment that reflects current economic conditions. Some system of mandatory arbitration is needed to settle strikes and other forms of labor-management confrontation.

We should encourage free trade for its anti-inflationary benefits. Trade should also be "fair." In instances where unfair competitive practices result in lost jobs at home, protections should be supplied. In cases where free trade will result in dramatic rates of disemployment at home, the effects should be slowed in order to allow a deliberate adjustment. Protections and slowed adaption, however, should demand a quid pro quo in the form of wage and price reforms by employers and employees involved.

Work reform offers the greatest potential. Plans developed by individual employers that gear wage increases to some combination of company performance will make wages more responsive to economic conditions. Provisions that allow employees to realize a larger share of their remuneration in the form of capital would also discourage inflationary impacts of wage settlements. In addition, the productivity incentives implicit in these kinds of arrangements may increase output per employee, reduce the inflationary impact of wage increases, and encourage price reductions in the longer term (Mitchell 1982a).

Supply-Side and Industrial Policies

With the responsibility for restraint left largely to the Federal Reserve Board, both major political parties have concentrated on developing growth strategies to increase productivity, reduce inflation, and increase employment. The Republicans have opted for "supply-side economics." Democrats have settled on "industrial policy" patterned after notions similar to the AFL-CIO's "reindustrialization" and the Carter administration's "economic revitalization." Both strategies tend to rely on tax benefits to promote growth in private industry. The difference between the two is a matter of form.

The Republican "supply-side" strategy relies on broad-based tax cuts for all firms and relatively advantaged individuals. These people and institutions are the nation's big savers. Therefore, it is argued, tax cuts for them will increase savings, investments, and, eventually, productivity and growth. Supply-side economics preserves the therapeutic distance between government and industry. It is a macroeconomic growth strategy. Industrial policy is a microeconomic version of the same strategy. Rather than enact generalized tax incentives, industrial policy advocates suggest growth incentives targeted on specific sectoral objectives.

The importance of these objectives is undeniable. In the longer term, increased capital formation invariably leads to higher levels of employment and productivity. In the short term, however, these policies will have little effect on current employment problems. Tax cuts are the

most expensive form of job creation, even when they are targeted on labor-intensive consumption. Tax cuts intended to encourage investment create even fewer jobs and at higher costs. They may even reduce employment prospects. Investment strategies draw money out of the spending stream and into savings and investment.

Reduced consumption through consumption-based taxes, whether through value-added taxes on production or individual consumption taxes, will reduce the employment impact of the tax code (Seidman 1981). Tax incentives that encourage productivity growth are also likely to reduce employment in the short term. General tax cuts for business, increased depreciation allowances, investment credits, and research and development tax benefits threaten even greater disemployment when they are enacted in a slow-growth environment. Cost savings are the most direct way to increase profits in a slack economy. Investment incentives in a slack economy encourage investment in labor-saving machinery in order to produce a restrained overall output at lower prices.

THE FUTURE OF LABOR MARKET IMBALANCE

An assessment of the future of labor market imbalance depends critically on one's choice of symptoms in measuring imbalance. If imbalance is intended simply to describe the fit between the supply of prospective employees and the demand for them, then unemployment is the proper measure of imbalance and the appropriate target for public and private strategies to utilize the available labor supply fully. Historically, however, Americans have chosen a somewhat broader definition of imbalance that includes a concern for the earnings distribution along with unemployment. To a large extent, it is a definition that derives naturally from the interplay of our political and economic systems.

In the democratic societies, it is an article of faith that incomes should be distributed fairly and that all should enjoy "equal protection" in pursuit of economic and social goals. In democratic political systems, it is also critical to the independence of individual citizens that their political freedoms not be abrogated by economic realities. In a capitalist economy, where incomes are derived from private gain, individuals derive their incomes by selling their skills and entrepreneurial talents in a free market for labor. If some portion of the citizenry is unable to earn a liveable wage in free labor markets, the independence of the citizenry is threatened and the democratic political structure is at risk.

If some group of citizens is persistently unable to realize a liveable wage or is persistently concentrated in some segment of the income distribution, then the basic political presumption of equal protection that undergirds a free democracy is belied by an economic system that unfairly creates dominant and subordinate groups. It is crucial in our system, which mixes democratic politics with free-market capitalism, that all make a liveable wage—preferably from work. It is also critical that no identifiable group be persistently concentrated in some segment of the income distribution. It is for these reasons that the American concern for labor market imbalance extends beyond unemployment to the extent of poverty and the distribution of income.

In 1979, of the 168 million Americans who were at least fifteen years old, 16.8 million were living in income-poor families, according to the official poverty standard ($7,412 for a nonfarm family of four). Of those poor individuals, 10 million were not in the labor force because they were disabled (27 percent), keeping house (36 percent), going to school (17 percent), or retired (16 percent). The other 7 million could not earn enough money from work or derive enough money from government transfers to exceed poverty income standards. An additional 3.5 million adults who were in the labor force for at least one week in 1979 would have been poor if not for government transfers. Altogether, more than 10 million Americans could not earn enough income in 1979 from work or returns on capital to rise above poverty standards (Saks 1982).

Poverty and unemployment overlap, but they are essentially different phenomena. Between 1972 and 1977, only one-fourth of the male heads of households (but two-thirds of all females) who suffered more than six months unemployment were poor. Three percent of those males and roughly 9 percent of the females who worked all year were poor.

Income distribution in the American economy has widened since 1948, and it continues to

widen. In the absence of government programs, income gaps between higher- and lower-income groups would have widened further. The major reasons for this more unequal distribution of income are that (1) earnings differences between upper- and lower-income groups are increasing and (2) annual hours worked have been declining among the lower income cohorts. Recent tax cuts and reduced growth in government income support have exacerbated these trends, but did not cause them.

A profound shift in the structure of jobs and wages attached to jobs is responsible for the decline in relative earnings between higher- and lower-income cohorts. Persistent unemployment and underemployment is the other principal cause. The former difficulty may be addressed with macroeconomic and microeconomic policies to lower the inflation-unemployment trade-off and increase the quantity of jobs and hours worked. The latter difficulty concerns the quality of jobs being created in the American economy and would require more profound changes in the American economic system, should remedies be required.

What accounts for income differences among individuals? Schooling, employer training, and experience tend to account for roughly 30 percent of income differences for whites and 40 percent for blacks (Lillard and Willis 1978). Personal characteristics account for another 40 percent of income differences, and "random events" or just plain luck account for another 30 percent. It is important to note that the effects of random events do not persist, whereas the effects of human capital and personal characteristics are more persistent. When workers are dislocated from their jobs, for instance, they suffer substantial income losses immediately. On the average, however, available data suggest they recoup those losses at a rate of roughly 60 percent per annum after the shock occurs.

The cases of unemployment and poverty are important in considering remedies. Human capital and personal attributes result in relatively permanent poverty and employment problems. Remedies will necessarily focus on increasing human capital investments and changing personal characteristics of workers themselves. Solutions will require longer treatments and be targeted toward changing the supply side of the labor market equation. The effects of dislocation or "random shocks" are less permanent and suggest more temporary and marginal remedies to expedite transitions. In all cases, the availability of work is critical. The maintenance of overall demand is presumed. Remedies for those who are permanently distressed or for those with more transitory job and income problems cannot succeed unless jobs are available.

Changes in Labor Supply

The labor force will grow more slowly over the foreseeable future. By the end of the decade, the labor force will be growing by half its rate of growth in the seventies. Between 1983 and 1990, that means we will need 6.85 million fewer jobs than we would have if the growth rate in the labor forces had continued at the same rate as in the seventies. The decline in labor force growth will be due in part to a leveling off of female participation rates, a slight decrease in those over fifty-five in the labor force, and more dramatic declines in the sixteen to twenty-four year-old population. This age group will decline by 2 million people between 1980 and 1990, another 1 million by 1995, and will continue to decline beyond the end of the century. The declining proportion of sixteen to twenty-four year-olds should increase employment and wages among youth, females, and minorities (Wachter 1981).

In addition, the declining growth in the labor force, in general, and the declining proportion of youths, in particular, should decrease the contribution of the structure of the labor force to the

noninflationary rate of unemployment, progressively lowering that rate as time passes. Estimates suggest a decline in the NAIRU of around 1 percent as a result of this factor alone. If the additional effects of price shocks, wars, health care, and housing could be eliminated, an NAIRU between 4 percent and 5 percent would be achievable with macroeconomic stimulus alone. There are other optimistic supply-side trends. As the baby-boom cohort moves into the twenty-five to forty-five-year age range, their experience and workplace training will increase (Carnevale 1983) resulting in productivity improvements that should also lower the noninflationary rate of unemployment.

As the overall number of new labor-force entrants declines, the composition of new workers will also change. More than two out of three new workers will be female or minority. These were the prospective workers with the most severe deficits in human capital and work experience in the late sixties, seventies, and early eighties. The declining size of the entry-level cohort may make more affordable targeted strategies to assist those most in need of relatively expensive human capital development. Moreover, as the number of new entrants declines, public, private, and military competition for these groups may encourage greater human capital investments and work experience among them.

Fertility among minority females has not declined as it has among majority females. As a result, an increasing share of new labor force entrants will be minorities—blacks and Hispanics. As of 1980, blacks made up 12 percent of the population, but their average age was 24.9 years as compared with 31.3 years for whites. Hispanics represented 6.4 percent of the United States population and had a median age of 23.2 years in 1980. Thus, while the proportion of sixteen- to twenty-four-year-olds is expected to decrease by 9 percent for whites, the number of youths will increase for blacks and Hispanics by more than 1 percent.

Although both black and Hispanic populations are expected to increase as a proportion of total population, Hispanic population growth will be most rapid. Depending on birthrates and immigration policies, the Hispanic population could increase to between 10 percent and 13 percent of the population by the year 2000 (NCEP 1983). Female participation will also remain high, suggesting that women will also comprise a substantial share of new entrants. Between 1950 and 1980, female labor force participation increased from 34 percent to 52 percent but is expected to level off to 56 percent between now and the year 2000.

In general, trends in the supply of labor are very optimistic for future decades. A relatively smaller and more experienced work force should drive unemployment rates down and productivity up. As the supply of workers diminishes, especially at the entry level, females and minorities should move closer to the private hiring queue and all-important access to jobs and workplace training that accounts for most earnings increases in the labor force.

There are some "wild cards" in the labor supply equation that may muffle these trends. As jobs and decent wages become more available, the labor market overhang of those who do not currently seek work for want of a "desirable" job may be drawn into the labor market. At the same time, those secondary earners and others who currently seek work to increase family income may leave the labor market, should increased earnings of primary wage earners become sufficient for family support. These uncertainties are especially relevant to women and young people. With increased income among new labor market entrants, family formation could start earlier, and women could leave the labor market for extended durations if they value child rearing more than available jobs and wages. Young people may rely more heavily on the earnings of other family members for support as income from primary family wage earners increases.

A different set of trends will affect older male workers. With greater affluence, generous

pensions, and expanded disability coverage, men have retired at successively earlier ages in the postwar period. In 1950, more than 60 percent of the males aged fifty-five and over were in the labor force. By 1980, the proportion had fallen to 45 percent and is expected to decline still further to 37 percent by the year 2000. The current increase in mandatory retirement age and the pressure to reduce retirement and disability benefits, however, could increase male participation and lengthen hiring queues (Sawhill 1983a).

Another major imponderable is immigration. Legal immigration peaked in the first decade of this century at 10.4 immigrants per thousand Americans. During the Great Depression, the rate fell to .4 immigrants per thousand Americans. The rate has never risen above 2.2 per thousand Americans since the Depression. Immigration has shifted dramatically from European to Asian origin. In the fifties, Europeans constituted 59 percent of immigrants. The remainder of immigrants were made up of Asians (6 percent), Canadians (11 percent), Mexicans (13 percent), West Indians (5 percent), and South Americans (3 percent). In the seventies, Europeans comprised 19 percent of all immigrants, West Indians increased to 18 percent, and Asians to 35 percent.

Skill levels among immigrants have also declined as family ties to previous immigrants have dominated entrance requirements. Even skill levels among European immigrants to the United States have declined as growing European economies provide increased opportunities for skilled natives (Butz, McCarthy, Morrison, Vaiana 1982). In addition, there may be as many as 4 to 6 million illegal immigrants in the United States. These derive mostly from Mexico and other Latin American countries as a result of population pressures created by declining infant mortality rates. Illegal immigrants are also relatively unskilled.

The effects of immigration on employment are difficult to specify exactly, but they are probably not dramatic. Immigrants are, by definition, ambitious and aggressive. They tend to have low earnings at first, but within eleven to fifteen years they exceed the earnings of domestic workers with similar levels of education and experience (Saks 1982). Available data suggest that an additional 1 million immigrant workers reduces wages of low-skilled domestic workers by about 4 percent, but would increase the gross national product (GNP) by about half of 1 percent (Johnson 1979). Whereas competition from immigrants appears to reduce wages for low-skilled workers initially, their effects on overall employment are minimal. Moreover, with the number of entry-level workers declining at some point, we may want to consider encouraging additional immigration or a "guest worker" program to make up for declines in unskilled labor.

Distressed Workers

Labor market distress is by no means a monolithic phenomenon. The most severe distress is highly concentrated. About 5 percent of working men who are heads of households are permanently disadvantaged in that they are persistently found in the lowest decile of male earnings, even over ten years of observation. In any given year, 21 percent of female heads of households who are in the labor force are in the lowest decile of male earnings (Freeman 1981).

In addition to their concentration, labor market problems should be separated into their permanent and transitory elements. Those who are permanently distressed because of low human capital investments or personal characteristics, including race, language, or cultural differences, sex, age, location, or handicapping conditions, require more extensive treatments to ameliorate distress. Those whose labor market difficulites are transitory, including most youth, virtually all workers displaced by economic change, and relatively advantaged females, can be assisted more effectively with services that ease their transition into work.

Perhaps most importantly, in assessing needs and remedies for each of these groups, we need to be realistic about our goals. Providing employment and maintaining income are qualitatively different goals from improving income distribution or the distribution of good jobs. In the sixties, policies emanating from the "war on poverty" were intended to improve income distribution in the United States. Improvements were to be measured by the increased "tightness" of income around the national mean and by the extent that an individual's location in the income distribution was random when measured against the individual's age, sex, race, ethnicity, geographic location, or handicapping condition. In other words, no individual group was to be concentrated at any point along the nation's income curve. In the seventies, the felt need for macroeconomic restraint in the face of runaway inflation resulted in substantial disemployment. Labor market policies became more prevalent but less ambitious. In large part, these policies tended to demand work as a quid pro quo for income maintenance or simply provided income maintenance as the unemployed and dependent populations overwhelmed the more ambitious goals of the sixties.

It is a central theme of this study that labor market distress derives both from the low earnings of many of those working and from the number of hours worked. Moreover, the distribution of income is largely determined by the level of hourly earnings and only marginally affected by the number of hours worked. Increasing hours worked will improve the unemployment rate and discourage underemployment. Although a higher level of employment will maintain incomes, it will do little to change the income distribution if relative earnings from work remain constant. For instance, the earnings of the disadvantaged, the bottom 5 percent of the earnings distribution averaged $2.31 per hour in 1979. Even if the annual hours worked by the disadvantaged increased to full employment, their annual earnings would come to only $5,304 per year. Earnings of those in the bottom decile of the earnings distribution, which averaged $2.51 per hour, would total an annual income of $5,763 (Freeman 1981). Full employment strategies that increase the quantity of work will not compress the distribution of income. Because income disparities result from the earnings attached to jobs, only strategies that improve productivity in the lower tier of jobs or redistribute jobs will compress income distribution. Only a redistribution of good and bad jobs will make earnings a random phenomenon with respect to identifiable groups.

A final consideration in assessing needs and remedies is the age distribution of distressed workers. Labor force attachment increases with age. The problems of youth in the labor market center on successful transition into a job with sufficient workplace training to encourage job security and a career ladder. Adult workers are distressed because they did not make a successful transition in their youth or because they have been displaced from good jobs as a result of an economic downturn or more fundamental economic shifts.

The problems of older workers are also characteristic of their age and workplace experience. Unemployed older workers find it difficult to secure reemployment because wage and benefit costs often exceed the anticipated return to the employer in years of expected work. In many instances, age and disability reduce productivity and encourage firings, quits, and early retirement, all of which adversely affect income security.

Youth

Unemployment among young people between the ages of sixteen to twenty-four is often triple the unemployment rate for adults. When the unemployment rate for adult males rises by one percentage point, unemployment among youths increase by anywhere from three to five percentage points (Freeman and Wise 1982). It is this relationship between overall unemployment and youth unemployment that accounts for the high rates of youth unemployment since the latter

sixties. Restrained growth in the interest of reduced inflation was the principal cause of the youth unemployment of the sixties and seventies.

The explosion of the youth cohort because of the aging of the baby boom in the sixties and seventies was a secondary factor. The often cited influx of the baby-boom cohort did not have an appreciable impact on youth unemployment as the oversupply of young people was offset by downward wage adjustments (Russell 1982; Wachter 1982). Males aged twenty to twenty-four, for instance, earned seventy-three cents for every one dollar earned by males forty-five to fifty-four in 1955, but earned only fifty-eight cents on the dollar as compared with their elders by 1975, when the influx of young people peaked (Wachter 1981).

The declining number of youths mentioned previously portends optimistic supply-side effects. The close connection between youth unemployment and overall unemployment, however, results in a less optimistic prospect. If the average unemployment rate for the eighties exceeds the average unemployment rate for the seventies, demand conditions will erase the optimistic supplyside effects, and youth unemployment will continue at roughly the same rate experienced in the seventies (Saks 1982).

The average unemployment in the seventies was 6.2 percent. At the end of 1983, the average rate for the eighties stood at 8.5 percent—more than enough overall unemployment to compensate for optimistic supply-side effects emanating from the declining youth population. Available projections (DRI 1983) also suggest that the overall unemployment rate will not fall below 8 percent until the latter part of the decade. These data, in combination, suggest that demand, restrained in the war on inflation, will maintain youth unemployment at levels experienced in the seventies at least until the last few years of this decade.

It is misleading, however, to equate unemployment among youths and adults in a strictly quantitative fashion. Youth unemployment, in general, is less severe than adult unemployment. At least some portion of youth unemployment derives from the process of educational and labor market experimentation characteristic of the youth cohort. Young people are sometimes unemployed because of experimentation on their part to find the right mix of work and schooling. In 1950, only 15 percent of students were enrolled in schools; by 1980 the proportion had doubled. In addition, labor force attachment strengthens with age. When asked in January of 1978 whether they had been with the same firm for a year or more, only 30 percent of eighteen- to nineteen-year-olds said "yes," as compared with 50 percent of twenty- to twenty-four-year-olds, 72 percent of twenty-five- to thirty-four-year-olds, 84 percent of thirty-five-to forty-four-year-olds, and more than 90 percent of those workers over forty-five years old. The same survey showed that 30 percent of America's male workers between the ages of fifty-five to fifty-nine have been with the same firm for over twenty years.

Young people are at the beginning of this process of increasing attachment and are expected to experience greater unemployment than their elders. The structure of the American labor market reinforces the tendency toward experimentation. Unlike labor markets in more rigid societies, the transition from school to work in the United States is informal with little structure or institutionalized direction provided. Indeed, informality is the characteristic signature of the American labor market in all its phases. Young people progress through a series of stages before landing in a more or less permanent career pattern at roughly age twenty-five.

The importance of preemployment education and experiences is in the access they provide to jobs and training—formal and informal—on the job. Career and income ladders begin on the job. Most job skills are learned informally on the job. The dominance of workplace training cannot be

overstated. In the sixties, the President's Commission on Automation asked workers where they learned the job skills they were using. Only 40 percent reported they were using skills they had learned in formalized preemployment education and training. The remaining 60 percent reported they had picked up their job skills in the workplace. These results are not surprising. Most skills are best taught in conjunction with the job itself (Thurow 1983).

The informality of the American labor market is treasured for its encouragement of individual freedom, social mobility, and the flexibility with which it adapts to new skill requirements. At the same time, it is rightfully criticized for its outcomes, especially in the transition from school to that all-important first real job upon which lifetime prospects are so clearly dependent. We rely on the informality of the marketplace to perform this sorting function in the transition from school to work.

Unfortunately, by age twenty-five, a consistent portion of the nation's young people who are minority and female do not make successful transitions into primary jobs that provide good wages, job security, training, a career ladder, and a mutual commitment between employer and employee. These youths have the least successful "bridge experiences" in the transition from school to work. They suffer most of the unemployment during that transition and tend to be scarred by those experiences sufficiently to effect their future performance and prospects (Corcoran 1982; Ellwood 1982). Whereas the more fortunate workers gain entry into primary jobs with workplace training and a career ladder, these "secondary" workers are channeled into labor markets in which jobs are characterized by low wages, high turnover, little training, and dead-end positions with little hope for advancement.

Evidence of the concentration of the youth problem is abundant. One study found that in 1977 three-fourths of the weeks of unemployment among youths were incurred by 8 percent of the youth labor force (Lerman 1980). The problem is most severe among black youths. One interesting piece of evidence as to the relative opportunities available to black and white youths in the school-to-work transition is the fact that young black males qualified for military service are three times as likely to enlist as their white counterparts (Saks 1983).

Teenage mothers are a second population with the least successful transition experiences from school to work. Teenage pregnancy dramatically reduces the lifetime opportunities of affected females (Kreps 1976). Although there is no evidence that the availability of Aid to Families with Dependent Children (AFDC) payments induces pregnancy, 71 percent of all AFCD recipients had their first child as a teenager.

Teenage pregnancies have declined over the past decade for both black and white females. A 1978 study found that 38 percent of teenage pregnancies were terminated by abortion. The pregnancy rate for white teens has fallen from 85 per thousand in 1957 to 45 per thousand in 1979. The rate for blacks has fallen from 173 per thousand to 100 per thousand over the same period. Whereas 33 percent of births among white teenagers occurred out of wedlock, 87 percent of such births occurred out of wedlock among black teenagers.

Distressed Adults

A small group of adult men and women consistently constitute the class of lowest earners in the United States. As stated previously, 5 percent of all males and 21 percent of female family heads are consistently in the lowest decile of male earnings. These persistently low earners represent roughly five million American households. Much of the consistent disparity is due to

relatively low earnings per hour rather than fewer hours worked. For the distressed male, for instance, annual hours worked were only a few percentage points lower than those of the average male worker, but his wages were $2.31 an hour compared with the average of $6.80 per hour.

The concentration of females in the lower tiers of the income distribution is almost totally due to earnings disparities. Current trends are likely to exacerbate these difficulties. Although the visible symptom will shift from unemployment to low wages, the fundamental difficulty of scarce human capital will persist. Among these trends are declining rates of increase in public income transfers, reduced taxes among middle- and upper-income earners, and—what is most important—the apparent polarization of the American job structure into a larger secondary and smaller primary job market. Increasing employment and hours worked can redress these earnings-based income differences only marginally.

Blacks and Hispanics

Early postwar discrimination against black Americans was consistent and universal. Black college graduates earned only two-thirds as much as their white counterparts, and black high school graduates earned three-quarters of the salaries of their white counterparts. By the late seventies, blacks with postsecondary educations had achieved parity. Black workers made progress in primary factory and government jobs. Black women achieved parity with white women. Black females and well-educated black males were clearly doing better.

At the same time, however, a larger cohort of black males in secondary labor markets were doing less well. In fact, many of these lowest-earning black males were either consistently unemployed or had dropped out of the work force altogether. With the number of middle- and high-income blacks increasing and the low end of the distribution disappearing altogether, it is little wonder that there were apparent gains in average black income. The adult male dropouts have been numerous. In 1969, 73 percent of black males were employed, compared with 78 percent of white males. Ten years later, in 1979, black male employment dropped to 64 percent as compared with 75 percent for white men. At the same time, the number of black two-parent families in poverty declined from 41 percent of all poor black families in 1969 to 25 percent of all poor black families in 1978. However, the overall number of black families in poverty did not decline due primarily to the rising number of poor black families headed by women. The net effect of all these trends has been a bifurcation of black income and labor market opportunities into a relatively small group of "haves" and a larger group of "have nots."

Apparently, black males and females who make their way into the primary labor market are treated fairly. Black females make wages comparable to those for white females in the relatively rigid low-wage female labor market. At the same time, blacks at the lower end of the income distribution are doing less well. Moreover, current trends are not optimistic for upwardly mobile blacks. The shrinking growth in the primary labor market is occurring in precisely those sectors where most black gains have been made—government and blue-collar manufacturing jobs.

Hispanic workers have a different set of problems—a more optimistic set. Available research consistently demonstrates that language and education barriers account for most of the differences between Hispanic and other workers. Income for Hispanics has grown 83 percent since 1972 as compared with 74 percent for whites and blacks (Freeman 1981).

Females

The increase in female-headed households has created the fastest growing and most concentrated labor market problem of the past fifteen years. Although these households are only 15 percent of all families, they represent 48 percent of all poor families. Early pregnancy, pregnancy out of wedlock, and family breakup are the immediate causes of poverty among female-headed homes. There are, however, more fundamental causes. Given women's labor market experience, human capital investments, the rigid segregation of female jobs into low-wage work, and unequal pay for females, single females are unable to provide family support. Among blacks, 50 percent of all children are raised in female-headed households. Such homes constitute 40 percent of black households. Nationally, 18 percent of all children are raised in such households.

In part, the difficulty for the poorest females begins with the fact that they occupy the lower rungs of the female job structure. Women's wages are generally less than men's, and they are declining. In 1959, women made 61.3 percent of males' wages. Their present wages are roughly 58 percent of males' earnings. Whereas human capital investments are lower for females and labor market participation is more erratic, the dominant causes of low wages stem from occupational segregation. Even when women break into male occupations, the effect is to drive down overall wages for all workers in that sector, occupation, or profession.

Distress among Relatively Advantaged Adult Workers

In 1975, 40 million workers were in the prime twenty-five to forty-four age category. By 1990, there will be 65 million workers in that group as the baby boom shoulders its way through its adult working years. That means 25 million additional adults to be absorbed into the working population. By virtue of its size—at 70 million, almost a third of the population of the United States—this generation expects institutional and social adjustments to accommodate its needs. The best educated group in American history, raised to adulthood during a period of unprecedented economic growth, the members of baby-boom cohort have high expectations for job security, psychic rewards from work, and advancement. There simply won't be enough good jobs and promotions to go around for this age cohort. If these expectations are to be realized or altered with a minimum of friction, changes in work relations must occur.

Although frustrated expectations may pervade the business environment of the eighties and nineties, they could be particularly severe among middle managers. From 1980 to 1990, the number of thirty-five- to forty-four-year-olds, the prime age for middle managers, will increase by 10.4 million, or 42 percent. The U.S. Bureau of Labor Statistics projects, however, that jobs for middle managers will increase by 1.7 million—from 8.8 million to 10.5 million—a gain of only 19 percent.

The result will be a promotional squeeze among middle managers. The resulting frustrated expectations may affect motivation and firm loyalties. The squeeze on upward mobility may be complicated further as more older workers choose to defer retirement and work longer because of persistent inflation. Intergenerational strains may arise. In addition, new labor-saving technologies and the trend toward slimming down management hierarchies could exacerbate tensions. Frustration may evolve into general militancy among white-collar employees, especially females. Limited promotions, combined with the influx of females into the labor market, are likely to result in increased Equal Employment Opportunity Commission (EEOC) pressure.

Dislocated Workers

Dislocated workers are relatively advantaged workers who lose relatively good jobs. Most dislocated workers tend to become reemployed after substantial losses of income. It takes most dislocated workers five years or so to get back to where they started from prior to dislocation. Some dislocated workers never do find jobs as good as those they lost. These dislocated workers represent underutilized human capital. Their losses of income, job security, and opportunity are severe and permanent. They face temporary unemployment and transitory or permanent income losses. Analysts and decision makers essentially agree as to the overall size and scope of the problem, but disagree vehemently as to its social significance, especially when compared to the dimensions of the hard-core unemployment problem discussed previously. The protagonists in this debate also disagree as to the extent to which public remedies are required in an environment of scarce resources.

Fundamentally, the debate reflects different views of the economy and its operations. Those who downplay the dislocation phenomenon tend to assume a flexible and highly rational economic structure in which reemployment is generally possible through downward wage adjustment. Theirs is the highly quantitative, deductive view of the world characteristic of macroeconomics. Their economy is a complex but continuous system of rational behavior. Income distributions and labor markets are a single queue; hence, deprivation is measured by a single continuous standard. Moreover, relative positions in the income distribution and labor market are judged statistically. An individual's income or labor market standing is measured largely in terms of that person's present situation relative to all others in the income distribution or labor market queue.

In assessing the problems of dislocated workers, these macroeconomic analysts see painful, but necessary, wage adjustments. Their sympathy for dislocated workers is tempered by the fact that these workers, with rare exception, never do develop labor market and income symptoms as severe as those found in hard-core poverty or unemployed populations. Moreover, these analysts tend to believe that attempts to aid dislocated workers will inevitably result in artificial employment security and income maintenance for the workers involved as well as stringent requirements for industries to give prior notification of layoffs and plant closings. These analysts view these kinds of policies as barriers to the fluid adjustment necessary in both labor and capital markets in order to maintain competitive advantage.

Those analysts who see calamity in dislocation tend to take a more behavioral view of the economic system. Their economy is highly institutionalized. The income distribution and labor markets are discontinuous. Both economic well-being and deprivation are relative phenomena. Their view is more dynamic than that of the macrotheorists. They see changes in income as indicators of individual good fortune or deprivation rather than as symbolic of one's current place in the income distribution or labor queue. The issue for those who see calamity in dislocation is not whether the dislocated employee lands a new job but how far he or she had to fall in the income distribution or job structure to obtain a job.

Dislocation, in this view, represents a violation of implicit contracts in the primary economy. It therefore threatens political and economic reprisals in the form of negotiated or legislated guarantees of those contracts that will, they believe, discourage the economic adaptation necessary to maintain competitive advantage. Advocates of dislocated worker programs conclude that in order to avoid protectionism, policies need to be put in place that ameliorate the suffering of these workers and provide a rite of transition to the best available jobs. Where possible, they advocate policies that will maintain income, status, and employment in the primary wage sector for

dislocated workers. In short, they would hope for policies to encourage maintenance of employment security in the primary sector, at best, and policies to ease the transition to jobs with lower wages, at worst.

To an extent, the concern with dislocation is part of the human capital component of a broader policy thrust that would discourage consumption in favor of savings and investment in the interest of longer-term growth. Dislocated workers represent the disadvantaged cohort among relatively advantaged workers in the primary sector. Supply-side tax cuts, industrial policy, training subsidies for employees, and a host of other initiatives announced with less fanfare are growth policies targeted on the primary economic sector.

Monetarist restraint in pursuit of a stable environment for expanded investment is another aspect to that thrust in public policy. In a positive light, these policies will expand the primary sector over the long term and provide additional good jobs. In the short term, however, such policies make primary jobs more expensive, reducing their number, and, with inflationary restraint, encourage disemployment in secondary job markets.

The dislocated worker has become the lightening rod for the growth debate, which is fraught with unspoken political, theoretical, and ideological differences. Industry and government favor a capital strategy that allows market forces to allocate the income and job effects of future growth. Big labor, especially the industrial trade unions, is pushing for employment security which maintains primary nonsupervisory employees in primary jobs. Labor is willing to relinquish job security which would freeze employees into existing jobs.

The popular interest in the dislocated worker problem can only be estimated. Perhaps the public senses a decline in the number of good jobs and polarization in the structure of jobs. The promotion squeeze among the baby-boom cohort (those twenty-five to forty-four-years-old) and an economy restrained since the late sixties may have combined with longer term trends to create a sense of a declining range of opportunities and a scarcity of good jobs. The declining returns to preemployment education and training and the decline in public sector and not-for-profit sector hiring of the relatively well educated may have also contributed to a general sense of lost opportunity. Autoworkers, steelworkers, and other displaced workers may have become the symbol for these trends. Similarly, technology and foreign trade may have become symbolic purveyors of the same forces in the popular mind.

The facts of displacement are reasonably plain. Operatives in old-line manufacturing are not declining in absolute numbers, but they are declining as a proportion of overall job growth. Most manufacturing job growth is coming from high technology manufacturing jobs that generally pay less than auto and steel jobs (Bluestone and Harrison 1982). High-technology manufacturing generated 83.5 percent of total manufacturing job growth between 1955 and 1965. All manufacturing growth declined significantly with inflationary restraint after 1965, but high-technology manufacturing still accounted for the major share of the growth that did occur between 1965 and 1975—7.5 percent in high-technology manufacturing compared with 1.5 percent growth in other types.

Between 1975 and 1979, high-technology manufacturing led the way again, growing at almost twice the rate of all other manufacturing (Premus 1982). In addition, job growth in manufacturing was concentrated in white-collar service and information jobs at the expense of nonsupervisory workers (Ginzberg and Vojta 1981). The latter phenomenon suggests that the service and information economy has invaded and begun to reorganize manufacturing in the interest of greater productivity, just as the industrial economy invaded agriculture, encouraging productivity improvements and dislocation almost a century ago.

The count of dislocated workers varies wildly. Dislocation is difficult to separate from cyclical unemployment in a restrained economy with high interest rates and an overvalued dollar because dislocation is concentrated in industries most sensitive to recessions and high interest rates. The upper bound on the number of dislocated workers suggests that between 1.6 and 1.9 million employees were job losers from declining industries in 1983 (Congressional Budget Office 1982). The extent of distress measured in terms of the duration of unemployment reduces this number dramatically.

The Congressional Budget Office (1982) identified two hundred fifty thousand of these people who were without work for more than twenty-six weeks. Another study showed roughly consistent tallies for 1980 with ninety thousand workers from declining industries and ninety thousand workers from declining occupations unemployed more than six months (Bendik and Devine 1981). However, the latter counts of displaced workers account for less than 0.3 percent of the American work force.

Dislocation does not appear to increase unduly the duration of unemployment. Association with a declining industry or occupation does not unduly extend the duration of unemployment unless one also lives in a region with a declining economic base (Bendik and Devine 1981). In regions with high unemployment, a dislocated worker could expect to be unemployed two additional weeks compared with a similar dislocated worker in a low-unemployment region. If the region was experiencing long-term population loss, the dislocated employee could expect an additional week and a half of unemployment.

Analysis of historical data shows similar patterns. Three-quarters of the recipients of Trade Adjustment Assistance payments recouped their old jobs at higher wages. A U.S. Government Accounting Office study showed that two-thirds of displaced workers got their old jobs back; 4 percent expected to be recalled; 10 percent found jobs elsewhere; and 5 percent were still looking for work (Nye, Scanlon, and Wholey 1978). That 5 percent tended to be older, minority, or female.

Compared with stable, low-income populations, dislocated workers do not suffer from severe labor market handicaps. Dislocated workers tend to have more preemployment education, as well as workplace experience and training. Their incomes are higher both prior to and during displacement, and the jobs that most of them eventually land are more stable and higher paying—whether they return to their prior jobs or move on to others. More than 60 percent of dislocated workers have other earners in their families and higher benefits during dislocation that allow them to await recall more easily or hold out for the best available job elsewhere (Bendik and Devine 1981).

If we compared dislocated workers with their peers—those still employed in the industries from which they came—the relative deprivation becomes more apparent. All displaced workers lose income while unemployed. Unemployment and other benefits do not replace more than 60 percent to 70 percent of prior income, and as much as 40 percent of such workers do not have generous wage replacement plans. Wage losses are highest for those who do not secure the same or another job in the industry that displaced them. Wage losses are especially high for those who fall from primary labor markets into secondary service jobs.

Losses of earnings among dislocated workers are highest in unionized industries. In the auto and chemical industries, earnings losses average 20 percent in the first two years after displacement and are generally recouped within five years. In textiles, where wages are lower, losses average 14 percent in the first year and are recouped within three years. Wage losses and labor force withdrawals are most severe among females and workers over fifty. Labor force

withdrawals for prime-age males have, however, been recorded as high as 17 to 22 percent of dislocated workers as a result of plant shutdowns (Holen, Jehn, and Frost 1981; Jenkins and Montmarquette 1979).

It is noteworthy that studies of the psychological and medical effects of dislocation show that dislocated workers do not initially suffer severe mental health problems (Gordus, Jarley, and Ferman 1981). To some extent, these findings may reflect the fact that these workers tend to come from industries in which temporary layoffs are not uncommon. These findings would also conform to the view that American workers, especially in primary jobs, see themselves as hapless individuals in a complex and manipulative social structure.

America's workers appear to have accepted the notion that employment is to some extent a social as well as an individual concern. As a result, the initial reaction is to discount personal responsibilities for unemployment and to wait for recall or for the union, company, or government to fix the problem. This view is encouraged when a substantial wage is provided through unemployment insurance, Trade Adjustment Assistance payments, and union and employer supplemental unemployment benefit payments. Whatever its source, the slow reaction of displace workers to the realities of their situation and prospects forestalls adjustments.

In a sense, the dislocated worker is the proverbial "person in the middle"—too skilled to work for $5 to $7 per hour as a microprocessor and not skilled enough to program a computer (Barth 1981). Income losses often reflect the lost value of years of acquiring human capital on a specific job in a specific industry that is not immediately transferable and loses value with disuse. The value of the team productivity in a particular work setting is not transferable at all. Nor can the dislocated worker relocate easily. Labor market mobility is generally limited to young, affluent professionals.

The older dislocated worker has sunk considerable income and psychic attachment into the community. Economic costs are an additional deterrent to relocation if the dislocated worker is a home owner in a depressed community or in a community experiencing sudden increases in unemployment. A surge in the number of homes available for sale in such communities drives prices down and destroys owner equity. In short, whereas the dislocated worker is relatively well off compared to the highly concentrated poverty population, dislocation is, at the same time, no "day at the beach." From the dislocated worker's perspective, it's not so much whether you "land on your feet, but how far you fall" that matters.

One important question in the examination of the displacement problem is whether or not we are confusing a cyclical or industry-specific adjustment with longer-term structural trends. It is apparent that all dislocated workers suffer income losses and that some of these workers fall into secondary labor markets and never attain the wages, benefits, and job security characteristics of the jobs they lost. Many analysts, most notably Bluestone and Harrison (1982), suggest that these facts portend a fundamental shift in the job structure to one in which there are fewer and fewer good jobs and more really bad jobs. Comparisons between the wages in the manufacturing jobs being lost and the new services being created do, indeed, show an earnings gap.

At the same time, if the displacement of manufacturing workers is the primary evidence for a polarization of the American job structure, the case is a weak one. Autoworkers and steelworkers, the principal focus of media attention, earn considerably higher hourly wages than other manufacturing workers and most service workers. The total compensation of autoworkers and steelworkers is 50 percent greater than the average of all manufacturing in the United States. Half of that difference was created since the early seventies (Saks 1982). In addition, adjustments in

auto and steel wages and employment may be a special case. The monopolistic power of American auto and steel manufacturers and associated unions may have held wages in these industries artificially high. Dollar devaluations may have artifically increased the world price of American auto, steel, and other manufacturing exports, especially since the early seventies.

American manufacturing employment is growing, not declining, in absolute terms. Adjustments in manufacturing employment and wages appear to be occurring within the manufacturing sector as much as between manufacturing and other economic sectors. A closer look at the reputed sources of displacement—technology and trade—reveals really only minor displacement effects. These effects are widely reported, perhaps, because they are obvious and interesting, but they are not terribly important in overall employment trends. Technological displacement is relatively minor and easily within the ambit of natural attrition in manufacturing. The United States has always been a net benefactor of foreign trade, although adjustments do occur in individual industries and product lines.

Most job loss in the United States can be easily traced to a stagnant economy and policies that encourage stagnancy in the war on inflation. The public and the media may be confusing these cyclical phenomena and their abstruse and indirect causes in macroeconomic policy with fundamental changes in the American economy. Tight monetary policy, for instance, raises interest rates and the value of the American dollar. Durable goods are interest sensitive, and sales can be expected to decline with rising interest rates. The dollar, overvalued in 1983 by as much as 24 percent, makes American goods expensive overseas and reduces trade in manufactured goods. For example, the auto industry estimates that $1,400 of the $2,000 cost differential between American and Japanese cars results from an overvalued dollar and an undervalued yen. The competitive advantage between Caterpillar Tractor Company and Kamatsu has turned dramatically in favor of the Japanese for the same reason.

It is generally agreed that we lose twenty-five thousand jobs per $1 billion of exports lost. At that rate, the $8 billion decline in our exports to Mexico alone has cost us two hundred thousand jobs. At the same time, the debt crisis in the developing world discourages imports and encourages exports in debtor countries in order to realize a more favorable trade balance. In short, restrictive monetary policies at home and the plight of debtor nations abroad may account for a substantial share of manufacturing job losses. Overall estimates suggest that our declining trade position, mostly a result of policy choices and the developing world's debt crisis, has added as much 1.5 percent to our unemployment rate.

The Supply Side

By past standards, the news from the supply side is good for distressed workers. In the seventies, a tidal wave of new workers entered the work force. The total civilian labor force increased by 22 million people in the seventies, a 36.6 percent gain over the previous decade. By comparison, the labor force grew by 13 million or 18.8 percent in the sixties and by 7.4 million or 11.9 percent in the fifties. Employment also grew at phenomenal rates during the seventies—3.1 percent annually between 1974 and 1979, three times faster than the fifties and double the rate of job growth in the sixties.

The American economy created almost 19 million jobs in the seventies, compared to 13 million in the previous decade. Normally, such a phenomenal rate would be cause for celebration. In the seventies, however, the supply of new workers swamped the economy's ability to create sufficient work to accommodate them. In the seventies, the American economy expanded to create 19

million new jobs but was overrun by 22 million new job applicants. The result was persistently high rates of unemployment, averaging 6.4 percent over the decade.

The surge of new, young, and female workers also outran the ability of employers to maintain capital-to-labor ratios critical to productivity. Capital per worker dropped 20 percent in the seventies as compared with the previous decade. Analysts also argue that the relatively low levels of human capital investment in the flood of new, young, and female job seekers and the unavoidable inexperience of many of them contributed appreciably to decline in productivity through the decade.

Two major factors accounted for growth in the labor force over the period: the maturation of the baby-boom cohort to working age and an increase in the number of working women. About 76 million members of the baby-boom cohort born between 1946 and 1964 entered the work force in the seventies. While the total labor force grew by 26.6 percent, the sixteen- to twenty-four-year-old age cohort grew by 38 percent over that period, comprising one-fourth of all workers by 1980. The number of working women soared by 42 percent in the seventies. As a result, four out of every ten working Americans are women—up from one in three in 1960.

The labor force adjustments of the seventies were painful. Having paid the price of integrating a sizeable cohort of new workers into the economy during the seventies, however, the stage has been set for significant worker productivity improvements in the late eighties and early nineties. The youth and labor cohorts that came as inexperienced entrants into the labor market during the seventies will be better educated and trained and more experienced in the eighties, when the work force will begin to concentrate in the twenty-five- to forty-four-year-old age cohort—historically the worker age span when productivity is highest.

Unlike the seventies, labor markets in the eighties and nineties will reflect the declining birthrates of the baby "bust." National birthrates started rising in 1946 and peaked in 1967 at 25.3 per thousand population. The rate has fallen steadily since reaching 14.8 births per thousand by 1975. The birthrate rose slightly to 16.2 births per thousand population in 1980 as women of the baby-boom population bulge reached peak child-bearing age. This baby "echo" has been unusually muted and is insufficient to maintain even zero population growth (ZPG).

Natural replacement of the population (ZPG) requires a birthrate of 2.1 children per woman of child-bearing age. The current 1.7 births per woman of child-bearing age is below ZPG and well below the 3.7 children per female rate at the height of the baby boom. As a result of the post-1957 decline in birthrates, only 16 million new workers will be added to the American work force in the 1980s, compared with 27 million and 20 million new workers in the seventies and sixties, respectively.

The prospect of overall labor shortages depends on the rate of economic recovery. Recovery and growth rates at or above those experienced in the seventies, however, would trigger labor shortages. Male labor force participation is likely to continue its downward trend, and female participation is likely to grow throughout the decade. The labor force will grow by roughly 16 million in the decade of the eighties, with twice as many new females as new male workers.

If employment were to expand as fast as it did during the decade of the seventies, creating 19 million new jobs, overall labor shortages would be likely. A growth in employment totaling 19 million jobs would easily absorb the projected 16 million new entrants into the labor market. Rates of job growth in the eighties similar to those in the seventies would eliminate cyclical unemployment and provide work for about 1.5 million workers currently "structurally unemployed" for want of education, skills, and the benefit of white male, middle-class kinship.

With the growth rates in employment similar to those in the seventies, unemployment rates could average between 5 percent and 6 percent over the next decade. The fall in unemployment could be quite sharp for some groups. For example, by 1990 1.5 million fewer youths will be in the sixteen-to twenty-four-year-old age cohort. This drop is roughly equivalent to the average annual number of unemployed youths during the seventies. Should a labor shortage arise in the eighties and nineties, the likely effect will be to increase wages, especially for sixteen- to twenty-four-year-olds, as both civilian and military employers compete for a declining pool of entry-level workers.

Over the medium term—between now and the year 2000—the employment prospect is not intimidating. If labor productivity were to advance at historically reasonable rates—at roughly 2 percent a year—we would need 64 million new jobs between now and 2000. Half of these jobs would be needed to provide for workers displaced by productivity, and half to account for increases in the labor force. To reach this jobs target, an annual growth rate of 3.2 percent per year would suffice. This growth rate is considerably higher than the 2.4 percent realized in the restrained seventies but lower than the 3.5 percent achieved over the entire postwar period (Sawhill 1983a).

The Demand Side

The news on the demand side is not good for distressed workers. As a matter of self-conscious policy, the economy will be restrained over most of the remainder of the decade, and unemployment will remain high. Inflation remains the "fly" in the economic "ointment." Even in its measured absence, the fear of inflation encourages a tolerance of high rates of unemployment and creeping growth. The first hurdle to be cleared is inflationary expectations. It is argued that high budget deficits must be met with creeping growth in monetary aggregates to demonstrate the Federal Reserve Board's determination not to monetize the deficit.

An accelerated monetary expansion would, it is argued, destroy confidence in the federal government's self-discipline and reignite inflationary expectations among business institutions and workers, encouraging price and wage increases in anticipation of future inflation. As a result, even though most subscribe to the view that inflation should accelerate as a result of structural factors until the unemployment rate declines to 8 percent, it is feared, especially by the monetarists, that too rapid an acceleration in growth even prior to 8 percent unemployment will reignite inflationary expectations.

The alternative view argues that expansion could proceed much more quickly until structural factors encouraging inflation are encountered between 7 percent and 8 percent unemployment (Galbraith 1983). These progrowth advocates point out that wage increases have fallen below 5 percent in 1983 and are unlikely to increase rapidly. In addition, these protagonists suggest that much of the current deficit is a direct result of high levels of unemployment and the general effects of the current restraint on tax revenues. They direct attention to the fact that each point of unemployment adds $25 billion to the federal budget deficit.

Moving beyond the Inflationary Wall

At 8 percent unemployment, or wherever expansion turns sour and inflation reignites, more profound policy issues come to the fore. If we treat 7 to 8 percent unemployment as a wall beyond which expansion cannot proceed, we may create a self-fulfilling prophecy. The persistent restraint that comes with such a policy will discourage human and other forms of capital investment and,

over time, reduce the nation's capacity for growth and potential for full employment. In addition, war and the threat of war seem endemic.

The resultant surges in unbalanced spending will most likely encourage inflation again. The current American military buildup is a case in point. Supply-side shocks seem equally endemic. Available research suggests that it requires as much as seven years for such shocks to work their way through the wage and price structure (Cechetti et al. 1981). Already, new price shocks are emanating from bad American harvests and will affect food prices during the latter months of 1984.

Our ability to reach persistently low levels of unemployment and to sustain them may require some extra anti-inflationary instruments. The present environment of low wage and price inflation is optimal for experimentation with such policies. Interested parties have the least to lose at the moment. When inflation is high, crafting anti-inflationary policies is most difficult. Sectoral policies for food, energy, and residential construction are promising. Diplomacy may be the best anti-inflationary policy if we are to avoid the wage and price effects of sudden surges in military spending. All the latter policies can avoid inflation at its source.

Additional structures should be developed and kept ready for curbing inflation that is transmitted into wages and prices. At a minimum, we could create the information and monitoring systems necessary to track the transmission of inflation into wages and prices. Such an information and monitoring system would allow some lead time to fashion ad hoc informal policies to avoid inflationary eruptions into wages and prices. Such an information system would make more formal wage restraint ranging from sector restraints to economywide wage and price controls more administratively feasible. At a minimum, passive information, monitoring, and consultative structures could be created that institutionalize the active participation of representatives from labor, management, and government.

Any anti-inflation strategy should include a substantial international element. The overvaluation of the dollar and the world's debt crisis adds as much 1.5 percent to the current unemployment rate. Reform of the international monetary system and an aggressive trade policy would be beneficial to domestic unemployment. In addition, if such policies allowed for domestic expansion in developing countries, political stability would be encouraged among them. The net effect would be a more healthy environment for American international investments. More articulate trade policies would encourage informal or even formal expansion of American exports to developing countries as a quid pro quo for American investments and extensions on or forgiveness of debts in developing nations.

If the latter policies were successful, unemployment rates could be driven into the 5 to 6 percent range, notwithstanding a surge of new entrants encouraged by higher wages and greater employment opportunity. At that point, education, employment, and training policies would be necessary to increase the employability of the "hard core" among the unemployed and the underemployed who occupy this segment of the unemployment queue. Such policies would increase the potential productivity of this "hard-core" population, justifying entry-level wages.

All of these policies would increase employment and the hours worked among the unemployed. At the same time, however, these strategies would do little to improve the distribution of good jobs and annual earnings between white males and the identifiable populations concentrated at the lower end of the earnings distribution. Longer-term human capital investment strategies and changes in the structure of labor markets and jobs would be required if our goal is to improve income distribution among significant segments of the American population or to tighten the overall distribution of income.

The Distribution of Demand

The long-term shift toward white-collar work in services and information occupations will continue. Service and information occupations will continue to invade manufacturing as the modern manufacturing institution extends its scope and operates in an increasingly complex domestic and world economy—just as the highly specialized processes of industry and its attendant mechanization invaded agriculture a century ago. Service employment will also increase as functions formerly performed by households, voluntary institutions, and churches shift toward private and public providers. Manufacturing will grow absolutely but decline as a proportion of total jobs.

Some evidence exists that the jobs structure created by these trends will result in a wider divergence in earned incomes. This polarization thesis has little implication for employment levels. Moreover, so long as incomes in the lower end of the elongated distribution are sufficiently high, polarization has little implication for poverty rates. To the extent that a tight income distribution remains an implicit policy goal in American politics, both public and private strategies are available to redress perceived income inequities. Redistribution through government tax and spending policies is an obvious remedy. Historically, income inequities in particular industries have also been addressed through unionization. It is difficult to imagine either remedy as a popular alternative in the current political environment.

The geographic distribution of work is reasonably clear. The shift in job creation toward southwestern states will continue, but at a steadily receding rate. Wage costs and tax advantages are declining in the south as the United States becomes an ever more integrated economic entity. Regional income differences have already declined and will disappear as we move toward the turn of the century. At the same time, the advantages of the northern tier of states (in the form of their public infrastructure) should also begin to influence industrial location. As cost factors equalize, high-technology relocation, for instance, overwhelmingly favors those high-infrastructure states, according to a recent survery of relocation among high-technology firms (Premus 1982). It is noteworthy that the survey found that after wage and tax costs, the education and training infrastructure was consistently regarded as the most important factor affecting relocation decisions.

Ultimately, however, most new jobs are homegrown. Relocation of outside employers accounts for very little of new job creation in state and local economies. Moreover, contrary to the current misimpression, most jobs will come from small establishments, but not from small businesses. Small business accounts for new jobs in rough proportion to its representation in the total output of a local or regional economy—usually about 30 percent. Most of the remaining new jobs come from small establishments owned by larger firms. Because most new jobs are homegrown, the patchwork pattern of economic development is likely to continue. Large urban centers and poor rural areas will continue to be pockets of poverty and unemployment. Short of self-conscious relocation of substantial shares of economic activity, the current unequal geographic pattern of economic development will continue.

Technology

The "wild card" on the demand side of the employment equation is the impact of new technologies. Many writers believe that radical changes implicit in new information technologies constitute an economic revolution. Some believe that high-technology production will dominate job growth; others take an opposite view—that technology will eliminate massive numbers of jobs.

Both views are overstated, according to available data. High-technology production will not comprise more than 5 to 10 percent of all jobs over the foreseeable future. Moreover, most high-technology jobs will be relatively low-wage, manufacturing jobs. The more important employment impact of technology will be in its penetration into the work environments of economic sectors far removed from the production of high-technology devices. The important impact of new technology will come in its use, not its production.

Other writers, fascinated with high technology, argue that its penetration into the economy will result in massive dislocation of American workers. Both current and historical evidence argues against this view. Historically, new technologies have always increased employment. Higher ratios of capital to labor reduce costs and increase sales. Increased sales compensate for jobs lost to new technology and create new ones elsewhere in the economy. In the short term, this historical relationship may have been curbed by our combination of tax incentives to promote technological investments with monetary restraint.

As discussed previously, the combined effect of investment incentives and demand restraint may be to encourage investment in the interest of reducing costs, especially wage costs. With market shares and overall sales restrained, one way to increase profits is to reduce costs. As a result, companies may be encouraged to invest in technologies to reduce wage costs rather than to increase production. Since wage costs are difficult to reduce by lowering wages, management is encouraged to reduce wage costs by substituting technology for labor—by either displacing workers or allowing the number of employees to decline with attrition. The temptation to substitute machines for workers is exacerbated when wage costs, in the automobile industry for instance, average slightly less than seventeen dollars per hour, and the cost of new robots runs roughly six dollars per hour. At these rates, the cost of new technology can be recovered in a few years.

At the same time, this substitution effect can be vastly overstated. It is likely that the historical relationship between technology and jobs has not been radically changed. To the extent that displacement incentives are operating currently, they are probably due to (1) evolutionary shifts in individual industries and (2) a collision between the incentive effects of our current anti-inflationary restraint (in combination with strong fiscal policy incentives for research and development and investments in machine capital). If historical relationships are any guide, new technology will create more jobs than it destroys.

In the eighteenth century, Britain's textile industry was automated. By 1800, employment had increased in British textiles by 350 percent. Ford introduced automation and assembly line production in 1910 and increased employment 350 percent in ten years. Between 1955 and 1976, employment increased in high-technology industries five times as fast as all other industries. High-technology manufacturing grew three times as fast as all other manufacturing. Other studies of the effects of technology on employment in other industries have all concluded that more technology results in more jobs in the industry in question, as well as great economic output and more jobs outside the industry or firm in question. Technology and jobs rise and fall together (Sawhill 1983a).

Available data suggest that actual displacement from technology is relatively minor. Actual job losers do not appear numerous and are well within the bounds of natural attrition. Estimates of displacement should be considered in comparison with the overall size of the economy and natural rates of job turnover. Job losses from quits, retirements, and discharges in most parts of the country average roughly 50 percent of all jobs. These losses tend to be absorbed into new jobs in the same establishment or elsewhere (Saks 1982). Natural turnover from quits, retirement, and terminations in manufacturing where the new technologies are likely to hit hardest, averages 25

percent to 35 percent of all jobs each year. Manufacturing turns over roughly 6 to 8 million jobs per year.

Five to six thousand robots are presently operating in the United States's economy. There may be as many as one hundred thousand by 1990. If each robot replaces three workers—one for each shift—three hundred thousand could be displaced. Even if all the latter displacement resulted in job losses, less than 0.3 percent of all American workers and less than 3 percent of the total manufacturing work force would be job losers. The rate of displacement falls easily within the tolerance of natural attrition (Sawhill 1983a). The maximum rate of penetration for new technologies indicates that as many as 4 million factory workers or 3 percent of all United States workers could be replaced by machinery by the turn of the century (Ayres and Miller 1982). This estimate, however, takes no account of the costs or efficiency of such a rapid rate of penetration of new technologies. Industry does not operate with the best technology, but with the most appropriate and cost-effective technology.

These somewhat optimistic perspectives are predicated on the continuation of the historical relationship between technology and jobs. Some believe these relationships have changed:

> There are signs today, however, that past experience cannot serve as a reliable guide for the future of technological change. With the advent of solid state electronics, machines that have been displacing human muscle from the production of goods are being succeeded by machines that take over the functions of the human nervous system. (Leontiev 1982, p. 188)

According to this view, the impact of technology will be felt all the more when policies that encourage inflation restraint give way to more robust growth. In addition, advocates of technological displacement suggest that effects will occur over the long term. Leontiev (1982), Theobold (1981), and others who make this argument suggest that eventually massive government transfers will be required to maintain consumption of high-technology production and to maintain overall growth.

EDUCATION

The American preemployment education system provides basic quantitative and qualitative skills through universal elementary and secondary education. Secondary vocational education and postsecondary education institutions also provide general occupational and professional skills. Virtually all job-specific skills, however, are learned informally or formally in the workplace (Carnevale and Goldstein 1983). Preemployment education and training provide access to jobs, whereas formal and informal learning on the job determine career patterns, earnings increases, and progress up the various career ladders. The distinction between preemployment and postemployment education and training is important for policy.

Preemployment and Postemployment Education and Training

The current oversupply of college graduates in some areas and the general high level of educational attainment among the population suggest that our economic investment in preemployment education and training has reached, and perhaps exceeded, optimal levels. Given the high rate of high school completion, increases in preemployment education and training attainments will have to come from increased postsecondary attendance. The projected job structure, however, does not suggest an increase in demand for individuals with more than a few years of postsecondary education and training. These trends suggest that the major share of individual productivity and earnings increases from education and training is likely to come from postemployment education and training in the future.

Caveats

This commonly held view deserves important caveats. First, there are more than economic reasons for encouraging greater average levels of preemployment education and training. Nurturance of the culture and the polity is arguably more important than the provisions of human "fodder" for the economy. Second, whereas actual skills learned in preemployment education and training may overreach actual job requirements, educational attainment will most likely continue to be the principal means for sorting among job seekers. As a result, access to preemployment education and training needs to be fairly distributed among the population.

Third, an oversupply of preemployment education and training may reduce income gains from increased years of schooling for individuals but result in long-term economic productivity gains for the society. With this view in mind, America might well pursue a macroeducational strategy that emphasizes some desirable mix of skills and talents irrespective of current job prospects. If, for instance, we all agreed with the bias that economic growth and human progress were largely predicated on the expansion of scientific knowledge, we might opt for an educational and training system that cultivated talent in the sciences.

We might, for instance, create a huge oversupply of education and training in the sciences. The "cream of the crop" that actually land jobs as scientists would probably be superior to those

we would have obtained by encouraging just enough science education to suit our short-term economic needs and to fill available job slots.

Moreover, to the extent our curricula shifted toward the sciences, the whole population would probably exhibit a scientific bent in the workplace, in community life, and at play. A scientific world view would be more characteristic of the culture. We would have appetites for scientific entertainments and gadgetry. We would more likely employ scientific principles and artifacts in our work and play. If the culture adopted a scientific tone, all forms of work would require some degree of education and training in the sciences as our artifacts, services, and cultural creations became predisposed to a scientist's world view.

Is this idea farfetched? Perhaps not. Attempts to change the emphasis of preemployment education are evident in our history. The United States made an attempt to shift toward the sciences after Sputnik. The current spate of legislation to emphasize scientific and technical literacy emanates from a kindred concern (Hurd 1982). In fact, cultures do exhibit biases as between intuitive and analytic styles. For the most part, these are not the result of self-conscious policies but the result of complex historical evolution. In addition, the implementation of such a self-conscious policy would be difficult in a social system such as our own.

American culture and character are elusive. The unifying themes in our intellectual and cultural tradition are thin. They include an optimistic enlightenment, rationalism, the frontier tradition, and a common historical experience of material abundance. Along with the Soviet Union, we share the distinction of being the world's most religiously, geographically, racially, and ethnically heterogeneous nation-state.

A characteristic use of human talent is probably least evident in societies as diverse as our own and more characteristic of more homogeneous cultures. If such a characterization of the use of human talents is at all possible in American society, it is probably a bias toward the highly verbal, qualitative communication skills necessary in a diverse and democratic culture. It can be argued speculatively that these skills are the primary focus of our huge investments in mandatory elementary-secondary education and the critical status of the legal and media professions in the United States.

Macroeducational strategies of this sort may be impractical in the current American context but more feasible in the future. If, as some assert, rapid economic and technical change should increase the gap between preemployment educational preparation and actual job requirements, as well as change job requirements radically and often over a working lifetime, broadly based quantitative and qualitative preemployment education may be all the more necessary.

Moreover, as immigration continues to decline and the American population becomes more homogeneous with passing of the ethnic, religious, and regional differences, cohesive macroeducational strategies may be more feasible. In the case of the sciences, for instance, the United States will no longer attract the best resources from other cultures as differences in career opportunities decline for scientific elites. We have been able to import our Einstiens and Fermis thus far. In the future, they will have to be homegrown.

The final caveat concerns the distinction between preemployment educational attainment and achievement. This distinction centers on the difference between investments in the quantity and quality of schooling. Although the current investment in the quantity of preemployment education and training may be sufficient, the investment in quality may not. We may have produced too many college graduates relative to the number of jobs for college grads, but it is doubtful that the actual skill level of college or high school graduates has reached a point of diminishing returns.

Quality increases can always improve productivity and growth potential. In addition, without repeating the familiar litany of decline in educational achievement, suffice it to say that achievement has declined even as attainment or the number of years in school has increased. Moreover, evidence suggests that whereas educational attainment in the American economy exceeds job requirements, minimum achievement requirements for all Americans are increasing.

This trend may be strengthened in the future. The economic evolution toward a service- and information-based economy will make basic skills increasingly important as vocational skills. Service and information work require flexible use of communications, math, and reading skills more than traditional manufacturing where tasks are routinized and face-to-face contact is not critical to production. In addition, as relatively high-wage but low-skill manufacturing jobs give way to service jobs and greater manufacturing skill requirements, the link between wages and educational achievement will strengthen throughout the job structure (Drucker 1983).

Additional evidence exists that minimum skill requirements are increasing in the American economy. According to projections by the U.S. Bureau of Labor Statistics, three out of four jobs will require average achievement beyond high school (NCEP 1983). In short, it appears that changing skill requirements will affect both the low and high ends of the skill distribution, reducing skill requirements at the high end and increasing them at the lower end of the skill range. This "skill compression" concentrates education and skill needs at a level roughly equivalent to high school plus some marginal amount of preemployment training short of college graduation (Rumberger 1981).

These trends suggest shifts in the preemployment education and training system. Gains in educational attainment have already been dramatic. The median for school years completed has increased from 10.9 years of schooling in 1952 to 12.7 years of schooling in 1980. Occupational and professional skill requirements have encouraged a surplus of college graduates. During the seventies, 20 percent of college graduates accepted jobs traditionally not requiring college degrees. The proportion of graduates holding professional and technical jobs fell from 67 percent in 1970 to 55 percent in 1980, as graduates lowered their expectations.

Quality: A Growing Trend

The quality of the American higher education system is critical to overall growth in the American economy. Its research and teaching functions in technical and social sciences will determine our ability to adapt in an increasingly complex international environment (Carnevale 1983). In addition, college degrees may become an important screening device to sort among those seeking entry-level jobs. Actual job performance, however, will depend less on the number of years of schooling and more on the quality of preemployment preparation in combination with skills learned in the workplace.

Many individuals will continue to seek college degrees as preparation for professions and technical occupations and for the noneconomic benefits of postsecondary education. As educational attainment equalizes, productivity gains from education will have to come from increased higher education enrollments, achievement, or quality gains throughout the preemployment education and workplace training systems. Higher education enrollments are not likely to increase rapidly, given projected occupational demand; hence, productivity improvements will have to come from quality improvements (Carnevale 1983; Jorgenson 1983). The critical education challenge for the current system of preemployment education will be to improve the quality of its offerings and to complement workplace training with midcareer education and training for adults. Already, 35 percent of postsecondary students are over age twenty-five.

How can we improve educational quality? Greater commitments of time and money are the most promising paths to reform. Evaluations of educational performance demonstrate clearly that "dollars make a difference" as do the quality of teachers and administrators, parental involvement, and the actual amount of time spent with individual pupils. The current interest in the promotion of excellence is promising. If "excellence" means better teachers, better administrators, and more time spent with individual pupils in America's schools, overall achievement will most likely improve.

The most promising leverage point for improving quality appears to be in the hiring of new teachers. Increasing teachers' wages can buy better teachers, more teaching time, and various administrative and teacher education reforms. Projected high rates of turnover in the teaching profession at the elementary and secondary levels provides an opportunity to focus reforms early in the professional teaching career (before teachers have invested financially and psychologically in the current educational system). Moreover, the high rate of projected turnover in the near future suggests that a substantial portion of the elementary/secondary teaching profession can be reached in the reform effort.

Increased earnings for teachers are also warranted because teachers are underpaid* relative to others whose social contributions are, if current rhetoric is to be believed, of a lower-order priority. Teachers are paid less than most other public workers possessing professional degrees or similar occupational status. Public police, fire, sanitation, utility, library, transit, and health workers are all paid more than teachers. Teachers' salaries exceed salaries of all other nonsupervisory public workers by only 10 to 15 percent in spite of generally higher levels of education and preparation among teachers.

Currently, teachers are paid $17,000 per year after twelve years of teaching and $20,531 on the average. Moreover, this average salary is artificially high in view of reductions in the number of less-experienced teachers with the shrinking of teaching faculties due to demographic change and budgetary stringency. Starting teachers' salaries averaged $12,769 in 1981-1982. Starting teachers' salaries do not compare favorably with starting salaries in private industry or other public jobs.

Today there are over two million classroom teachers in the United States. Because of their high average age, retirement rates will increase rapidly over the foreseeable future. In addition, increasing enrollments will make classroom teachers, first in elementary and then in secondary schools, among the faster growing occupations in this decade and the next. As a result of these factors, the nation will hire an additional 671,000 teachers between 1981 and 1985—replacing more than 25 percent of the current teaching faculty.

Between 1986 and 1990, public schools will hire an additional 983,000 teachers—almost half the current classroom faculty. The increasing concentration of experienced and older teachers presents a related opportunity to exploit the experience of a senior cadre of American teachers. One approach would be to develop a corps of master teachers who, by virtue of their seniority and proven ability, would be given additional pay and status among their peers. That status might even extend to part-time postsecondary or other appointments for the purpose of instructing younger teachers in a given discipline.

Dollars, of course, do not make a difference all by themselves. They do, however, serve as leverage for those things that can make a difference. Salary increases should not be given as a windfall to the teaching profession without a quid pro quo in educational reform. Alternative

*Statistics related to teacher's salaries and employment opportunities are author analyses based on data obtained from the National Education Association and the National Center for Education Statistics, U.S. Department of Education

credentialing requirements that emphasize more depth in subject matter, the introduction of new technology to free up teacher time for interaction with individual students, more available teacher time to give extra help, and the introduction of lay teachers, guest teachers, and paraprofessionals into the school environment are all subjects for collective bargaining.

Education and Labor Market Distress

If the current interest in excellence results in an elitist strategy to encourage high achievers, it will not meet emerging economic requirements. Quality improvements that encourage average achievement levels and minimum competencies are more important. In addition, the achievement of minimum competencies among the lowest achievers will require a continuation of compensatory strategies that increase per-pupil resources targeted on the educationally disadvantaged.

Strategies that distribute resources equally across all students will perpetuate current achievement differences. A more elitist approach that concentrates resources on high achievers will increase the range in educational achievement. Moreover, the increase in school-age children from low-income families will increase the social burden on schools and make minimum competencies more difficult to achieve.

Improved survival rates for underweight and handicapped babies will increase the proportion of school children with special needs. Because fertility rates among disadvantaged minorities have not fallen with those of the rest of the population, children from these groups will also come to make up a higher proportion of school-age children. In addition, while the educational achievements of children from disadvantaged families have improved, the gap between these children and the more advantaged has not been reduced (Brown and Saks 1981). The school dropout rate is especially high among minorities, who will comprise a larger proportion of labor force entrants in the coming decades—45 percent among Hispanics and 35 percent among blacks (NCEP 1983).

The following reforms would be most advisable:

- The provision of part-time jobs for dropouts conditioned on reenrollment or participation in alternative schools has produced educational gains for dropouts. Experiments in the late seventies conducted under the auspices of the Youth Employment Act did not reduce dropout rates but did result in the participation of disadvantaged youth in alternative school settings. Programs such as these should be expanded.

- The current trend toward diluting targeting and aggressive enforcement of state/local maintenance-of-effort provisions under Title I ESEA should be resisted. As a result of strict enforcement of these provisions, the substitution of federal for state/local funds has been virtually eliminated in compensatory education programs. Peak funding for Title I ESEA should be restored at $3.4 billion. Subsequent annual funding should compensate Title I for annual inflation.

- The current concentration of compensatory education funding in elementary schools results in lost achievement gains during high school years, as well as a lack of funds to discourage dropouts and to prepare disadvantaged youth for the all-important school-to-work transition. Additional compensatory funding should be provided for the later elementary grades and secondary schooling.

The School-to-Work Transition

The most critical juncture in the life cycle of work is the transition from school to work. At present these five to seven years of exploration and human capital development are highly unstructured and informal in the United States. That informality is treasured for its flexibility and encouragement of social and economic mobility, especially when compared with rigid occupational tracking in other nations.

At the same time, the outcomes of the school-to-work transition persistently sort minorities and females into low-wage, insecure jobs that offer little training. The same informal processes sort white males into good, primary jobs with high wages, workplace training, job security, and a career ladder. Whereas general agreement exists that the flexibility and informality of the American labor market ought to be preserved, many writers argue that this last phase in the preemployment education and training process should be more carefully structured in order (1) to provide guidance and optimal "bridge experiences" to all youth and (2) to discourage the invidious sorting of youth by minority status, sex, and location.

Some measure of reform can be achieved in the nation's junior and senior high schools. As suggested previously, more resources should be allocated toward this final stage of preemployment education. More profound reforms are also called for. Secondary schools should provide a set of basic skills to enable all youths to negotiate the five-to-seven-year sojourn in transition to their first real job around age twenty-five.

The learning of job-specific skills should be left to postsecondary institutions and workplace training. Secondary schools should focus on only the most generalizable of such skills. Most youths do not settle in the labor market area in which they attended secondary schools. Most job-specific skills learned in secondary schools either do not match eventual career paths or have deteriorated dramatically by the time permanent career choices are made.

During the high school years, tracking of individual students into college bound, vocational, and general streams is inappropriate and ineffective. Vocational training at the secondary level, for instance, does not appear to result in any significant labor market gains for vocational students (Doeringer and Vermeulin 1981). The exceptions to this rule are immediate gains for males who are tracked into an industrial arts curriculum and find employment in the construction trades and for females who are tracked into dead-end clerical occupations in the female job ghetto. These gains disappear within five years, however, as similar students gain workplace experience and training (Olszewski 1981). A more generalized curriculum that emphasizes basic skills, including career planning and job search skills, would seem more appropriate.

Alternative strategies for providing more structure and equal opportunity in the critical years after secondary schools range from expansion of in-residence programs targeted on disadvantaged youth to the provision of counseling services and to compulsory national service programs. The Job Corps model is most popular for disadvantaged youth. This in-residence program provides the full range of social, education, and training services to disadvantaged youth at an average cost of $14,000 per youth. The Job Corps investment returns $1.40 for every $1 invested (Mallar 1980). The present Job Corps program, which provides roughly forty thousand years of service for disadvantaged youth at a cost of $589 million, could be trebled in size for an additional $1 billion.

A consensus is emerging that some form of national youth service may be desirable not only to accomplish specific civilian and military goals but also to promote a sense of shared purpose

and civic responsibility among young adults. Military service necessarily would be a component of any universal and compulsory program. (A compulsory program that was exclusively civilian would be in the violation of Thirteenth Amendment protections against "involuntary servitude.") According to the Potomac Institute, with a universal compulsory program, the military could absorb approximately four hundred thousand youths on active duty and an additional two hundred fifty thousand in the reserves each year (Sherraden and Elberly 1982). An additional 3.5 million youths between the ages of seventeen and twenty-four would be available for civilian service. It is reasonable to expect that this number of young people could be absorbed into civilian service. Available estimates, including those of the Congressional Budget Office, suggest that somewhere between 3 and 4 million youths could be absorbed in domestic and foreign service (ibid.).

Proponents point out that in addition to serving service needs and providing a sense of civic responsibility, such an experience could greatly ease the transition from school to work. As previously noted, the labor market experiences of youth between the ages of sixteen and twenty-five are haphazard. Those fortunate enough to have access to developmental work, education, and training experiences to bridge this transition phase end up with primary jobs that include a career ladder, good wages, employer training, and job security. Others end up in secondary labor markets where jobs are temporary, low paying, and dead end. A national youth service corps would provide a point of contact where all youths could go to obtain various forms of labor market assistance and to escape the vagaries of economic conditions. A youth service corps would structure the rite of transition from school to work, making it more efficient and fair for all young adults.

Costs of a universal program would be high. The civilian component of a universal and compulsory program could cost as much as $24 billion if all volunteers were paid minimum wages. Costs and the lack of infrastructure for a universal program suggest a more incremental development of a national service corps. A suggested incremental scheme might operate as follows:

- At least in its initial phase, any program of national service should remain voluntary. Mandatory programs should be considered only when voluntary programs reach participation levels approaching the universe of eligibles.

- As an incentive for participation, higher education grants and loans would be conditioned on youth service. Education grants and loans could also include reduced interest and repayment forgiveness for national servers. National servers—civilian and military—could also be allowed a $3,000 education and training voucher for each year of service up to two years. Costs for such a program would not likely exceed $2 billion unless civilian servers exceeded two hundred thousand.

- The number of available national service slots would need to be expanded for civilian volunteers. We could reasonably aim for one hundred thousand in the first four years. At their peak, federal volunteer programs for youth provide forty thousand slots in VISTA, Peace Corps, University Year of Action, National Health Service Corps, and National Teacher Corps. Funding for these programs would have to be restored and perhaps expanded to provide service opportunities. In order to reach one hundred thousand slots, an additional thirty thousand slots could be provided each year over a two-year period. We could reasonably expect to expand slots by thirty thousand per annum—with twenty thousand nonresidential slots and ten thousand residential slots. Stipends for residential slots could be held to $250 per month which would add to $3,000 per year. Each new increment of twenty thousand recruits would cost roughly $60 million. Residential

programs would cost roughly $8,000 a year per volunteer. Each new increment of ten thousand new residential volunteers would cost roughly $160 million. Administrative costs of roughly $50 million would not be unreasonable. Altogether, the cost of a program to maintain thirty thousand new volunteers approaches $270 million. Each increment of thirty thousand new volunteers—one-third residential and two-thirds non-residential—would cost an additional $220 million, assuming existing federal programs to 1979 levels.

DISADVANTAGED ADULTS

Education, employment, and training strategies have, except for a brief interest in relatively advantaged employees dislocated by automation, always intended to assist those most in need. Throughout the sixties, it was generally believed that both employment and income distribution could be altered with policies that improved the educational attainment of workers. These were largely supply-side strategies in that they intended to alter labor supply to fit market demands.

Employment and Training Programs

Employment and job training programs were offered in the sixties to aid those already beyond the reach of the preemployment education system, but they were a minor theme in the original War on Poverty. The principal employment and antipoverty strategy of the sixties was an attempt at improving the preemployment human capital of the disadvantaged in order to make them more saleable to employers and to allow them sufficient human capital to eventually draw abreast of their more advantaged counterparts in competing for jobs.

By the early seventies, the supply-side emphasis disappeared. Although real declines in federal education funding did not occur until the late seventies, both the lead role in the antipoverty mission and the dominant approach to assisting the disadvantaged shifted elsewhere. Supply-side and other more developmental policies began to give way to strategies that leapfrogged human capital development and provided minimum-training work experience or make-work jobs that were intended to leverage employment and earnings quickly and cheaply. In addition, the income redistribution goal receded in favor of employment and income maintenance goals in the high-unemployment economy of the seventies and eighties.

By the latter part of the seventies, the federal government had given up on even minimalist human capital strategies and substituted an overwhelming programmatic emphasis on direct job creation. By 1977, developmental supply-side strategies had given way to approaches that leveraged private demand for unemployed and disadvantaged workers or created public demand with public service jobs. Moreover, developmental programs had become unaffordable with budgets inflated by welfare entitlements for both disadvantaged and middle-income Americans.

Improving the labor market possibilities for disadvantaged adults has been the ultimate goal of most federal education, training, and employment programs. In pursuit of these objectives, a series of microeconomic programs targeted on disadvantaged clientele have evolved as complements to macroeconomic policies since the early sixties. Their history teaches some broad lessons that are worth reviewing. The first lesson worth remembering is the difficulty associated with attempts to improve the lot of those who are unemployed or permanently stuck at the lower end of the income distribution.

America's economic institutions and macroeconomic policies work well for most but consistently fail a small minority of the citizenry. Attempts to redress the labor market failures of the disadvantaged minority are inherently difficult in the face of the more pervasive institutional

forces that cause them. The first admonition for those who make such policies is that program goals should not exceed our willingness to allocate resources in pursuit of them or the desirability of making changes in the structure of American economic institutions.

The second lesson to be learned from this quarter century of experience is that preemployment human capital development has its limits as a device for allocating jobs and especially as a device for redistributing income. Tremendous changes in the distribution of educational expenditures and attainment would have to occur to actually redistribute jobs and affect income distribution solely through increased preemployment educational attainments. If we look, for example, at those whose educational attainment has increased most vis-a-vis the rest of the population, we can see the magnitudes of educational change required.

Between 1968 and 1976, the proportion of high school graduates among males twenty-four to thirty-four years old increased from 34 percent to 52 percent, and their percentage with less than a high school education has declined from 26 percent to 12 percent. As a result of these educational increases, the earnings distribution for all males was compressed by 11 percent. The relative earnings of those males with nine to eleven years of schooling increased by 5 percent and the earnings of those with twelve to seventeen years of schooling declined by 6 percent. This redistribution was accomplished with $39 billion in additional education spending between 1968 and 1976. If we had decided to tighten the entire distribution of national income by this 11 percent over the same period, the added cost would have been as high as $395 billion (Thurow 1980). We would have had to almost double current spending for elementary, secondary, and postsecondary education.

Human capital strategies are especially difficult for the disadvantaged because they have been attempted in an era when educational attainments are increasing for the entire population. Although compensatory education programs do produce consistent gains, those gains have not reduced the relative achievement and attainment gaps between the disadvantaged and the general population. Moreover, while the increasing educational attainment of the population has provided some lessening of the earnings gaps among people with different education levels, the distribution of earnings among people with the same education levels has actually widened during the sixties and seventies and is still widening.

This brings us to the most fundamental fact of life that we need to calculate into our expectations for any preemployment education and training program that intends to effect income distribution. The fact is that the income distribution process centers on the allocation of jobs and informal and formal workplace learning more than on the allocation of preemployment education and training. Basic preemployment skills make workers job ready and ready for workplace training—formal and informal—or provide an arbitrary device for sorting among an oversupply of job applicants.

Income possibilities are largely determined by access to jobs. Furthermore, the relative distribution of earnings among employees depends not on their preemployment education and training but on the productivity of the industry in which they work and the productivity of the working team of which they are a part. The productivity of the team is in turn dependent on experience and formal and informal training in the workplace. It is this reality that explains the variation in incomes among different people with the same preemployment human capital.

Macroeconomic policies that restrained overall growth and encouraged persistently high levels of unemployment exacerbated these effects and encourage another lesson from the past quarter century: preemployment education and training strategies work least well in slack

economic environments. The effects of preemployment, supply-side human capital policies are least effective when prospective workers are oversupplied. In such an environment, access to private employment and workplace experience and to training that can improve lifetime income possibilities is severely limited.

Conversely, these developmental strategies will work when labor markets are tight and jobs are available. Human capital strategies that prepare unemployed and disadvantaged workers can increase hiring in tight labor markets. By providing basic skills, they reduce training costs to employers who would otherwise have to supply remediation through workplace training. Subsidies to employers to provide remediation have the same effect.

In both cases, the cost of making the disadvantaged worker job ready or training ready are borne by the government, allowing individual entry-level productivity more consistent with entry-level wages. In addition, public programs can perform the recruitment function of sorting among the disadvantaged or unemployed, reducing entry-level screening costs to the employer. If the full extra costs of making the employee job ready and training ready are borne by public programs, or if employer costs are fully subsidized, productivity and wages are consistent, discouraging inflationary effects of further hiring.

Loose labor markets always operate against the interests of the most disadvantaged in the hiring queue. During economic downturns, the cyclically or temporarily unemployed are difficult to distinguish from the long-term or structurally unemployed. The cyclically unemployed do not require extensive, compensatory human capital investments or special help in securing jobs as do the structurally unemployed. These former employees will become reemployed with economic recovery. At most, they require income maintenance and, if the recovery is extremely slow, some means to prevent deterioration of their human capital. Unfortunately, employers and program operators are tempted to utilize public subsidies and available program slots for these relatively advantaged workers rather than for the more needy, long-term unemployed. The use of advantaged workers as clients guarantees success for public programs and higher workplace productivity.

In a surplus labor market, the employer—public and private—has no incentive to hire disadvantaged workers. The dictates of private and public production will encourage the employer to hire the best available applicant—the most qualified worker in the hiring queue. Program eligibility, however, has always far exceeded available public resources in employment and training programs. As a result of these incentives, hiring subsidies intended for the long-term unemployed are often utilized by relatively advantaged workers who happen to fit program targeting requirements—temporarily or superficially.

Similarly, public employment and training program managers have had a broad array of eligible clients to choose from. Program managers who are judged according to the number of positive transitions achieved and cost per placement have an added incentive to "cream the best bets" from an oversized pool of eligible clients. The net effect of these incentives in a high unemployment economy is to skim off the high end of the unemployment rate and to discourage expensive treatments for those most in need (Ginzberg 1982; Saks 1983).

Evidence of these effects is ample in the programmatic experience of the seventies. Developmental goals were overwhelmed by the immediacy of high levels of unemployment. Unlike the developmental emphasis of the sixties, the employment and training strategy of the seventies and early eighties emphasized placement at least cost. What little actual training did take place was human capital development in name only. On-the-job training was essentially a wage subsidy

to employers for employing the cream of the eligible population. Work experience, on the other hand, was a subsidized job for eligibles with the least salable skills—mostly minorities (Anderson 1980).

Program Outcomes

The employment and training programs of the seventies were most successful for females and Hispanics, the populations for which human capital deficits were least severe. They were least successful for black males—for whom human capital deficits were most severe. When eligibility requirements were tightened in the late seventies to target services on those at the lower end of the hiring queue, public and private employers lost interest in the programs. The effect was to reduce the employer uptake on wage subsidies and tax credits and to shift the management of public programs from local governments to community-based organizations. Eventually, given a choice between revenue sharing and employment and training programs, public interest groups chose the untargeted monies that allowed them the most discretion. By the early eighties, targeted employment programs had disappeared and overall employment and training spending had been reduced by two-thirds of the original amount.

There is little reason to believe that current employment and training programs will operate differently. The Job Training Partnership Act will be run by business-dominated Private Industry Councils (PICs) in order to involve the private sector more closely in the operation of employment and training programs. To the extent that access to employer-based institutions is the sine qua non for success in employment and training programs, the shift in programmatic governance is surely a step in the right direction. At the same time, however, resource commitments for employment and training programs have been reduced fully two-thirds (as compared with their peak funding during the Carter years) and unemployment rates are likely to persist above 8 percent. With less money and more eligibles, "creaming" is inevitable.*

In addition, the PIC governance structure continues to emphasize positive transitions to private employment as the ultimate measure of program success. With jobs scarce, creaming is more likely. Indeed, architects and administrators of the program have been forthright in their intention to cream off those who will benefit most from uses of the scarce funds allotted to the program. They recognize that, short of radical interventions into employer hiring decisions, the only way to provide decent jobs for the hard-core disadvantaged is to make them effective substitutes for relatively advantaged job seekers. The costs of such a strategy would be prohibitive in the current political environment.

Substituting disadvantaged job seekers for relatively advantaged ones in the hiring queue would create costly social and political tensions, especially if such a tactic were pursued on a grand scale when jobs were relatively scarce. As a result, planners and program managers of the current employment and training strategy are likely to take those in the front end of the hiring queue first. After the unemployment rate is creamed below 6 percent, the hard-core population—concentrated in the remaining pool of eligibles—will be taken in turn.

In the final analysis, the historical performance of employment and training programs should not be judged negatively. Once proper due is given to the environment in which these programs operate and the loose labor markets in which they were charged to perform, the results of the

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*Creaming refers to the tendency of employers to hire and employment and training program operators to provide program treatments for the most job ready prospects among the pool of eligible candidates.

programs are apparently more positive. After all, programs designed to compensate for the entire preemployment human capital creation process in a few years are bound to disappoint their architects. In addition, the scale of the programs has been small relative to the size of the eligible population.

The lion's share of employment and training resources has been devoted to income maintenance in the form of wages and stipends. Little more than five hundred dollars per participant has been available for developmental spending. All things considered, little real human capital development can be expected. Finally, income redistribution in a high-unemployment economy with a scarcity of good jobs is an unrealistic goal. In a downturn, the best that such programs can be expected to do is to provide human capital development in anticipation of recovery or, as has been the case historically, provide work and training as a quid pro quo for income maintenance and reshuffle work opportunities in low-income jobs in secondary labor markets among the unemployed.

With economic expansion, these programs can encourage hiring at the front of the unemployment queue and expedite the unemployment recovery. These programs are, at the least, inflationary means to create jobs because their ultimate purpose is targeted on employment. Therefore, the cost per job is lower—providing greater job stimulus per dollar spent. Tax cuts and general spending increases, for instance, create jobs at a cost approaching fifty thousand dollars per job slot. A targeted wage subsidy can create a net new job for as little as three thousand dollars. In addition, spending for these programs is likely to be less inflationary because the programs tend to provide temporary income at restrained wage rates to a population whose wage gains are unlikely to ripple through the mainstream wage structure. Clients in targeted employment and training programs and, oftentimes, the places in which they are concentrated are apart from the economic mainstream and its built-in inflationary structures.

In sum, the combination of employment, training, economic development, and other targeted programs constitutes something of a synthetic economy with its own artificial supply and demand structures. There is little connection between these synthetic economies and the larger wage and price structure. As a result, the transmission of inflationary wage and price pressures is greatly reduced. At the same time, the synthetic nature of these economies makes transitions into the real economy all the more rare and difficult for program clientele.

The general consensus among evaluators also suggests that earnings gains for employment and training programs are positive (Ashenfelter 1978; Bassi 1983; Congressional Budget Office 1982; Taggert 1981; Westat 1981). As is apparent in table 1, these gains are (1) highest for women, especially low-income minority women, (2) negative for white males, and (3) positive but relatively low for minority males. These and other data suggest that these programs work best for low-income minorities and females and less well for the relatively advantaged.

Employment and training programs have also been cost-effective. When reduced welfare costs and increased taxes are netted out of program costs, all employment and training programs return $1.07 for each dollar spent over ten years (Bassi 1983). In addition, these cost-benefit estimates do not include the value to society of the actual output produced by employment and training participants while they were in the programs. Unless we are willing to assume that recipients of on-the-job training, work experience, or public service employment produced no goods and services while enrolled, then we must assume that the broader social and economic benefits of these programs are understated.

Cost-benefit ratios for individual employment and training program treatments appear in table 2. On-the-job training and classroom training appear most effective. Other sources also suggest

TABLE 1

THE EFFECT OF PARTICIPATION IN CETA DURING 1976 ON POSTPROGRAM EARNINGS (MEASURED IN DOLLARS)

	Effect on Participants Who Were Economically Disadvantaged		Effect on Participants Who Were Not Economically Disadvantaged	
	1977	1978	1977	1978
White Males	238	635[a]	-330[a]	-24
Minority Males	309	-104	-142	6
White Females	263	679[a]	996[a]	1,210[a]
Minority Females	944[a]	1,054[a]	236	461
Average for All Participants[b]	524	796	178	417

[a] Indicates that the results are significant at the .01 level.

[b] Since these figures are based on a weighted average of the separate effects by race, sex, and group, it is not possible to determine the level of significance associated with each number.

SOURCE: Adapted from Bassi (1981).

TABLE 2

COST-EFFECTIVENESS OF TRAINING EFFECTS FOR DISADVANTAGED WORKERS OF CETA PROGRAMS

	Benefits Assumed to Last 5 Years	Benefits Assumed to Last 10 Years
PSE	.53	.87
Work Experience	.16	.26
Classroom Training	1.05	1.69
On-the-Job Training	1.11	1.80
All Activities	.66	1.07

NOTE: A measure greater than one (1) indicates that the long-term benefits to participants exceed the costs to taxpayers. While these figures roughly correspond to benefit-cost ratios, they should not be interpreted in the same way since a number of factors normally included in benefit-cost ratios have been omitted here.

SOURCE: Adapted from Bassi (1981).

that cost-benefit ratios are higher the more programs are targeted on the most disadvantaged, especially when they are female. In short, the most effective employment and training program in terms of its overall return and cost-benefit ratios is one targeted on the hard-core population among minorities and females. One important conclusion that can be drawn from these data is that whereas creaming may be unavoidable, it is more likely to result in lower earnings gains and lower cost-benefit ratios than a program targeted on the hard core among the unemployed and poverty populations.

The pre- and postprogram earnings of relatively advantaged participants are not likely to change dramatically as a result of their participation. Indeed, the postprogram earnings of relatively advantaged workers who have had recent labor market difficulties are not likely to compare favorably. Finally, relatively advantaged workers may have already made sufficient preemployment human capital investments to meet the actual skill requirements of most jobs.

The problem for relatively advantaged workers is access to better jobs. Although targeted employment and training programs can provide access to work, it is not often work in what most relatively advantaged workers would consider good jobs. Neither the placement nor the human capital effects of public employment and training programs are likely to (1) appreciably improve the lot of the relatively advantaged, experienced worker or (2) land a first job that is as good or better than those landed by their peers for relatively advantaged, new labor market entrants. By comparison, the hard-core, poor, and unemployed job aspirant is likely to have basic skill deficiencies and problems with access to work that can be significantly improved upon by both the human capital development and placement provided by these kinds of programs.

Consequently, pre- and postprogram earnings comparisons are likely to show favorable effects from program participation. In addition, the truly disadvantaged job aspirant is more likely to be publicly dependent than the relatively advantaged worker. As a result, cost savings from income transfer and other programs and the taxes paid by these workers (once they are employed) are more likely to result in higher cost-benefit ratios.

Although the income gains made by CETA program participants were promising, most of them occurred as a result of increased hours worked and not from increased hourly earnings. Typically, 75 to 95 percent of income gains result from increased employment hours, with the remainder coming from higher hourly wages (Wachter 1983). Wage gains as a result of participation in these programs were strongest for females. For females over age twenty-four, increased wages accounted for 20 percent of increased income.

The important question is whether skill acquisition results in greater income per hour worked—a better job—or whether there is simply a placement effect whereby employment and training programs provide a rite of passage for participants into more stable but essentially similar employment. One might assume that the split between increased income and increased wages reflects the relative weighting of the placement versus the human capital development effects. Selection into a federal program might provide access to more stable work in the former case, and human capital development would logically provide access to a higher-paying job.

The seeming dominance of placement over human capital effects is more apparent than real. Given the relative paucity of actual developmental spending, the latter's measured effects on earning levels are very optimistic. One might posit that greater spending on human capital development would provide better jobs for the disadvantaged, especially females and Hispanic workers. It seems that the human capital lever still has some unutilized potential for reallocating jobs and income toward disadvantaged and female job aspirants.

A ROAD MAP TO FULL EMPLOYMENT

The road to full employment has steepened over the postwar period. It is also strewn with inflationary barriers to discourage progress and is characterized by slow momentum toward full employment. If a way to full employment exists, it depends on a carefully mapped mix of macroeconomic and microeconomic policies. An anti-inflationary strategy will be necessary to remove inflationary stumbling blocks in the path of expansion. The engine of expansion will have to be fueled with job creation strategies that promise the best job-creating "bang" for each expansionary buck to avoid undue inflationary momentum, especially as the full employment goal draws near. At the same time, the work force will have to be developed and prepared to provide labor that is sufficiently productive to justify entry-level wages, if increased employment is not to be inflationary.

Once the full employment summit is reached, it is unlikely to be held indefinitely. Price shocks and economic cycles guarantee that the journey toward full employment will proceed in fits and starts and that the summit will be taken, only to be lost and retaken. In a society based on work, such as our own, there is no substitute for trying to arrive at full employment. In such a society, income for those able to work ought to be earned with current or prior work effort, if those who receive it are to be full partners in the economy, culture, and polity.

High (relatively full) employment can create sufficient income virtually to all but eradicate poverty. In addition, in a high-employment economy, attrition and expansion create numerous openings in good jobs. For these reasons, it is only in a high-employment economy that it is possible to contemplate further efforts to encourage an allocation of jobs that does not persistently distribute extremely bad jobs to identifiable segments of the American population.

There is no single way to full employment. Appropriate routes vary with time and circumstance. In the current economic context, overall expansion is likely to encounter accelerated inflation as expansion drives the unemployment rate below 8 percent. Without an alternative inflation strategy drawn from among the proposals discussed previously, the nation will be forced to live with unemployment at levels between 7 percent and 9 percent over the next four years, at least. In the meantime, additional episodic shocks from war, mobilization, or sudden surges in commodity prices resulting from manipulation by foreign cartels or natural events could force new cycles of restraint and high unemployment.

Once price shocks occur, it may take over half a decade to adjust to them. Without a mix of macro- and microeconomic anti-inflationary policies, the American economy will continue to be vulnerable to episodic inflationary shocks and persistent high rates of unemployment. Moreoever, the persistent bouts of restraint and a general climate of uncertainty will discourage human as well as plant and equipment investments, reducing the economy's fundamental capacity to generate high levels of output and employment. At some point, the notion of a high rate of unemployment, as a natural artifact of the American economy, becomes a self-fulfilling prophecy.

With a mix of anti-inflationary policies in place, others at the ready, and an understanding that they will be used in combination with overall monetary and fiscal restraint, there is no reason to

believe that unemployment cannot be driven well below the 8 percent wall that presently impedes our progress toward full employment. Employment or job creation strategies will be most appropriate until we reach the 6 percent unemployment terrain. "Training" or expanded human capital development will be appropriate beyond 6 percent unemployment, if job seekers in this segment of the hiring queue are to be sufficiently productive to justify entry-level wages.

An additional roadblock may be encountered somewhere below 6 percent, when we confront overall capacity constraints. These impediments stem from (1) the underinvestment in plants and equipment that comes with inflation itself and (2) the premium that inflationary expectations add to interest rates. Ironically, they also derive from persistent anti-inflationary restraint and resultant high interest rates.

This phenomenon may well have caused some of the inflation in the seventies, when we attempted to drive employment beyond the economy's capacity to provide sufficient plants and equipment per worker to maintain productivity in new jobs. In 1979, for instance, when unemployment reached 5.8 percent, plant and equipment limitations appeared to deny further reductions in unemployment without runaway inflation. This process constantly ratchets the economy's employment capacity downward.

Unacceptable inflation produces high interest rates that, in turn, discourage investment. Anti-inflationary restraint discourages business expansion and maintains high rates of interest, further discouraging the investments in plants and equipment necessary to complement human labor. The effect is to reduce overall economic capacity and potential output per person. As a result of these processes, restraint in one period reduces the economy's capacity to provide jobs in a subsequent period. Alternatively stated, high unemployment in one period—the result of restraint—reduces the economy's ability to attain lower levels of unemployment in succeeding years.

Initially, as we drive the unemployment rate below 8 percent, policies that maximize job creation per dollar of stimulation would be optimal. Long-term human capital development need not be emphasized for individuals encountered prior to the 6 percent unemployment range. Most people in this segment of the unemployment queue can be "creamed" by job creation incentives with minimal additional transition services or training. Most of these people are job-ready and ready for employer-provided, job-specific training. Such job creation strategies should be judged by their ability to provide elbow room for creating jobs without igniting inflation.

Should we be able to shoulder our way below the 6 percent mark, we will likely encounter human capital impediments to full employment. A different set of policies will be required if we are to proceed further toward full employment. Those who occupy this segment of the unemployment queue (and others who may be drawn into the labor market because our progress has rekindled their hopes for work) will require extensive human capital development if their prospective productivity is to justify entry-level wages and not ignite inflation.

The final hurdle—plant and equipment constraints—may be encountered somewhere below the 6 percent range in the unemployment queue. The hope would be that such constraints on full employment will have been eliminated with the investment incentives in operation since the early eighties. In addition, with a more balanced anti-inflation strategy, interest rates should be sufficiently low and growth rates sufficiently high to encourage a release of investments pent up by high interest rates long before the capacity constraint is reached.

Timing will be critical. The full range of anti-inflation policies and standby policies will need to be in place before we attempt to breach the 8 percent barrier with job creation strategies. Human

capital as well as plant and equipment investment strategies to allow noninflationary expansion toward those at the end of the hiring queue will have to be instituted long before the 5 to 6 percent human and machine capital investment barriers to expansion are breached. Such policies require long lead times for maximum effectiveness.

Feeling our way toward full employment will require some obvious changes in current policies. Changes in our anti-inflation strategy were discussed earlier. Shifts in labor market policies, however, will also be required. Microeconomic employment policies will have to be added to the current mix in order to "cream" the unemployment rate toward the 5 percent range. Training or human development policies will have to be in place long before expansion arrived at the 6 percent range. Training and human development programs will have to target aggressively on the hard-to-employ at the tail end of the hiring queue, even when the unemployment rate is substantially above 6 percent.

Current incentives emphasizing placements at least cost will have to be eliminated, at least until the unemployment rate is driven down to a point where jobs are actually available for the disadvantaged population. Program evaluations should emphasize individual human capital improvements rather than job placements until expansion creates sufficient demand to provide employment for such workers. In addition, when demand is sufficient and the unemployment rate has arrived at the lower end of the employment queue, targeted employment subsidies should be instituted to encourage hiring and to defray any extra costs incurred in orienting and training prospective employees at the lower end of the hiring queue.

Targeted employment policies enacted prior to expansion below 6 percent are unlikely to be effective in providing jobs for those they are intended to help—the hard core of the unemployed and poverty populations. The letter more than the spirit of such policies is likely to be honored as employers and program officers fit relatively advantaged clients to targeting requirements. Targeted employment policies run the risk of creating tensions among social classes if they work in high-unemployment economies, because they will take jobs from the working class and near-poor and allocate them to the poor. When such programs result in a ritual of meeting the letter but not the spirit of targeting requirements, they create a moral hazard for program managers and employers by providing incentives for a cynical disregard for the spirit of public law. In sum, targeted employment policies should be avoided unless the demand for disadvantaged workers is evident.

Detours

Progress toward full employment is not likely to proceed smoothly. The line of progress suggested earlier may be interrupted at various junctures and trashed altogether should experience suggest alternative routes. Price shocks, wage and price movements that are unresponsive to anti-inflationary policies, and the failure to remove human capital or capacity barriers before they are overtaken by expansion are only some of the possible interruptions in progress toward full employment. Yet, if full employment is to be realized, a strategy is necessary.

The strategy proposed here emphasizes policies that conform to the actual operation of the labor market. It is an attempt to take the path of least resistance. Rather than attempt to discourage creaming in a high-unemployment economy, it is suggested that we embrace it with policies that encourage creaming. It is only by institutionalizing creaming with loosely targeted employment policies that expansion will eventually move down the employment queue to those workers experiencing persistent labor market distress. Employment policies that attempt to target

on the hard-core unemployed prior to that point would only result in social tensions if they really worked.

Jumping the hard-core unemployed ahead in the hiring queue may seem arbitrary and capricious to others who are ahead of them in that same queue and who are better qualified. Fortunately, or unfortunately, virtually all the program benefits and hiring occur at the head of the queue, irrespective of targeting requirements. In short, targeted policies in a high-unemployment economy are a snare to the extent that they encourage invidious distinctions among the unemployed and an illusion in that those at the head of the queue are always taken first, anyway.

Our experience seems to bear this out. The Work Incentive Program (WIN) tax credit, targeted since 1971 on welfare mothers, has been a dramatic failure. The largest number of credits claimed in any single year has been fifty thousand. Over a two-year period when five hundred thousand WIN recipients entered the labor market, only eighty-eight thousand credits were claimed. The Targeted Jobs Tax Credit (TJTC), which replaced the untargeted New Jobs Tax Credit (NJTC) in 1978, was used almost exclusively for low-wage, low-skill jobs. Half of the credits were used by students working part time and 25 percent of the recipients remained registered after they were already on the job. Moreover, the truly disadvantaged who are recipients of such largesse are "labeled." Their place at the end of the hiring queue and their status as undesirable employees is certified by the imprimatur of the United States Congress and the President of the United States.

The second principle implicit in the road map to full employment is that training and human capital development ought to be reserved for those who need it. With programs to cream at the front end of the hiring queue, targeted training programs for those toward the end of the queue become feasible. "Positive transitions" into full-time work at least cost per placement should be the evaluative standard for employment programs, especially those that cream.

Developmental progress for individual participants toward job readiness should be the standard for compensatory education and training programs. Disadvantaged participants should be given a sequence of education and training treatments that prepare them for work and job-specific training with employers. Targeted employment incentives should not be made available until the unemployment rate reaches the 6 percent terrain. At that point, employment and training subsidies may be utilized to expedite transitions and reduce the inflationary impact of hiring those at the tail end of the hiring queue by subsidizing employers' search and training costs.

There are important exceptions to the general ban on employment subsidies targeted on the disadvantaged prior to the point where overall demand would make such subsidies effective. First, at some point in the training sequence, work experience may be an appropriate training treatment in order to teach work habits. Second, if it takes too long for overall demand to move down the hiring queue, the disadvantaged will be held in a human capital development limbo. In the short term, "community service work" could also be supplied as a quid pro quo for participation in the human development program. In the longer term, especially in areas where overall unemployment rates will only come down slowly, publicly provided jobs—a euphemism for the banished notion of "public service employment"—would be the only option.

Mainstreaming

The mandate of this human capital development system would be to fill in the cracks between the mainstream human development institutions. Among the profound sources of poverty and unemployment in the United States is the isolation of certain populations and places from the

mainstream society and economy. Structures intended to address poverty and unemployment should avoid encouraging further isolation to the extent possible. Our human capital development system, for instance, should not provide basic skills training if clients can be handled better in elementary, secondary, and postsecondary schools. It should not provide job-specific training unless it is very clear that clients cannot get such training on the job or at the direction of prospective employers. This structure should be regarded as an artificial "second chance" system for the disadvantaged. Its mission is to move the hard-core unemployed population back into mainstream institutions and the larger labor market. The system should not be allowed to become an artificial and self-contained economy with its own education, training, and labor market structures.

Again, there are important exceptions. In specific geographic areas, where the real economy has collapsed or disappeared, the substitution of a whole-cloth artifical economy may be necessary. In addition to the provision of human resource development in these areas public contracting and relocation incentives should be utilized to build a more viable economy base. In sum, there are both rural and urban areas in the United States where planned developmental strategies are still necessary on both the supply and demand sides of local economies.

"Creaming" Down to 6 Percent Unemployment

So long as unemployment persists above 6 percent, the best device for creaming the front end of the hiring queue is a temporary marginal wage subsidy. Such a subsidy will create the most jobs with the least stimulus, thereby minimizing inflationary impacts. The most expensive job creation strategy is general expansion. It has been estimated that, in 1978, at least $44,500 of general spending increases or tax cuts were required to create a single job (Bassi 1981). Tax cuts targeted on investment rather than consumption create even fewer jobs per dollar. A job created through expansion in public works spending costs as much as $30,000. An untargeted wage subsidy that pays only part of hiring costs requires somewhere between $3,000 and $9,000 per job.

Marginal wage subsidies have numerous attractive features. Subsidies allowed during downturns could maintain employment and output at reduced prices. The cost of wage subsidies for those who would otherwise be temporarily laid off would be offset by savings in unemployment insurance and revenues recaptured through taxable wages. Output would be generated at lower prices, reducing the burden on macroeconomic restraint. In addition, the marginal subsidy would require an employer contribution and discourage continued employment only for those whom the company truly intended to rehire.

Employees would be maintained in real jobs as opposed, for instance, to "make-work" jobs, where output has little positive impact on productivity and prices. Such subsidies would also encourage maintenance of employees in the work setting where they can use their skills and even increase them, if additional slack time is utilized for more training on the job. A wage subsidy designed to retain workers could encourage more training simply by including employer-based training in the statement of purposes or by offering additional subsidies for formalized training programs.

Wage subsidies initiated at the trough of a recession entail similar benefits. The subsidy reduces hiring costs and accelerates recovery. Reduced labor costs would give greater "bang for the expansionary buck" without encouraging inflation. Reduced costs would encourage greater output at lower or relatively stable prices. Perhaps most important, a marginal wage subsidy would utilize the careful calculus of production to do the hiring. Shared costs of hiring would encourage

employers to make hiring decisions consistent with their production needs. Few make-work jobs would be created.

In addition, individuals would be hired according to their fit with the employer's business plans. People would be fitted into jobs that provided economic and social utility. Employees would not be treated as unspecialized labor power as they are in make-work jobs. Nor would employment be a punitive quid pro quo for publicly provided income. Moreover, unlike strategies that emphasize wage reduction and low-wage, low-skill jobs, employment would be more likely created in sectors that provide higher wages and more workplace training and career ladders rather than in the low-wage.

Our experience with untargeted marginal wage subsidies is limited but optimistic. The New Jobs Tax Credit (NJTC) passed in 1977 was not generally known among employers and lasted only a single year. The tax credit amounted to 50 percent of the increase on each employer's wage cost above 102 percent of the previous year's wage costs. The U.S. Treasury reports that firms claimed $1.5 billion in tax credits and created a gross number of 1.1 million new jobs. Subsequent analysis suggests that three hundred thousand to five hundred thousand of the new hires were people who would not have been hired anyway (Crawford 1983). The net cost to the government was between $2,600 and $4,400 per new hire, a cost that compares favorably with all other forms of job creation (see table 3).

Many complain that the windfall to employers from such a scheme is excessive. In fact, the windfall is probably less for a marginal wage subsidy than for other forms of job creation. The cost-sharing implicit in a marginal subsidy discourages unnecessary hiring. The windfall that may result from subsidies that would be paid for employees who would have been hired anyway may be curbed by adjusting the historical base that triggers the subsidy. The NJTC, mentioned above for instance, could have been allowed for all hires over 104 percent of the prior year's wage bill for an individual firm.

Some windfall is inevitable in any incentive strategy that uses the "carrot" of subsidy rather than the "stick" of direct regulation. We already tolerate many such windfalls in our economic policies. It is, for instance, an inefficiency we are willing to tolerate in our capital subsidies. Research and development tax credits, investment tax credits, and depreciation allowances all pay for substantial numbers of plants and equipment that would have been procured, anyway.

The United States has tended to use tax credits as the principal device for delivering economic incentives to employers. The tax device is popular because it allows individual and institutional choice as to program participation. Tax-based delivery systems are also flexible. One need not set program levels and provide appropriations prior to actual use of the tax incentive. Use may also vary over time without changing delivery systems. Tax programs are generally regarded as cheaper to operate, although administrative and compliance costs are often vastly underestimated.

Tax-based employment and training subsidies, however, do present problems. Firms that pay no taxes cannot participate in a subsidy program. Employers that pay little tax have little incentive to participate. Since the Tax Reform Act of 1981, there are more such firms and many more that pay little tax. A refundable tax credit resolves part of the problem. Even refundability, however, would still deny participation to private, nonprofit, and public employers. Since almost one in every three American jobs is paid with public or nonprofit funding, their participation would expand the ambit of a subsidy program greatly. Hence, if a wage or training subsidy is to reach all major employers, it would have to be refundable and include an appropriated element.

TABLE 3

COST ESTIMATES OF JOB CREATION BY PROGRAM TYPE (ADJUSTED AND UNADJUSTED FOR BUDGETARY OFFSETS)

Public Sector Programs[a]	Average Cost per Job (Adjusted)	Average Cost per Job (Unadjusted)
Untargeted PSE[b]	35,618 - 234,408	29,920 - 37,400
Targeted PSE[c]	5,445 - 8,573	5,300 - 7,465

Public or Private Sector Programs[d]	Average Cost per Job (Adjusted)	Average Cost per Job (Unadjusted)
Untargeted General Wage Subsidies	12,638 - 31,633	11,840 - 18,476
Targeted General Wage Subsidies	9,707 - 53,596	9,229 - 24,329
Untargeted Marginal Wage Subsidies	3,316 - 9,852	3,257 - 8,059
Targeted Marginal Wage Subsidies	2,224 - 6,547	2,198 - 5,708

[a] These estimates measure the cost of creating an additional job in the public sector. Since public sector programs also create additional jobs in the private sector, the cost of total job creation (public plus private sector) is overestimated.

[b] Based on employment expenditures of 40-50 percent of total funds.

[c] Based on employment expenditures of 71-100 percent of total funds.

[d] Based on a subsidy of 25 percent of the minimum wage. Marginal wage subsidies are assumed to be paid for workers hired in excess of 90 percent of the base period employment level.

SOURCE: Bassie (1981)

Many would argue that only the careful economic calculus characteristic of private employers would provide worthwhile jobs that would affect productivity and output favorably. These same protagonists would eliminate public and nonprofit institutions from participation in a subsidy program because products, profits, costs, and productivity are more difficult to calculate. As a result, they argue that such employers are likely to add employees without careful consideration of economic implications of additional hiring, especially on productivity and prices within the firm; hence, providing jobs in these sectors is likely to be more inflationary.

At the same time, it is also true that public and nonprofit institutions are characterized by the same production processes as private service and information industries. If public and nonprofit employers were to be eliminated from participation in an employment or training subsidy, logic would dictate that private service or information employers be excluded, as well. Moreover, service and information jobs in other industries should be eliminated, according to this logic. Indeed, as mentioned earlier, service and white-collar jobs represent a fair amount of job growth, even within the manufacturing sector. Alternatively, one could argue for including all employers on the grounds that the cost-sharing implicit in a marginal wage subsidy would provide discipline in public or nonprofit job creation as well as in private job creation.

Targeted Jobs

As argued earlier, a program to create jobs targeted on the long term, hard-core, or structurally unemployed, can be variously justified. First, it could require a prolonged period for unemployment to be driven below 6 percent, where we first encounter human capital impediments to further expansion. Work experience can be justified as one of the requisite treatments for the hard-core unemployed to teach them the workaday habits that can be learned only on the job. Some kind of targeted jobs program could also be justified as a "community service" quid pro quo for training and training stipends.

Finally, a targeted jobs program of a different type could be triggered when the unemployment rate goes below 6 percent, to defray the extra training costs to employers who will likely be uncertain about the prospects of hiring the hard-core unemployed, given their sketchy preparation and work history. A job subsidy of this kind, however, should not be triggered until expansion begins to expose human capital deficiencies below 6 percent unemployment. Moreover, with the unemployment rate at 6 percent, the hard-core unemployed would be close to the front end of the hiring queue, anyway, and only the most superficial targeting would be necessary to direct benefits to the disadvantaged.

EMPLOYMENT AND TRAINING STRATEGIES FOR THE RELATIVELY ADVANTAGED

Dislocated workers are, for the most part, relatively advantaged workers who lose relatively good jobs. Such workers lose the value of their human capital development on the job to the extent that long bouts of unemployment result in a deterioration of their job skills. Should they land jobs where their prior experience is of little use, human capital losses are substantial. Most dislocated workers regain their old jobs. Virtually all those who do not get their old jobs back regain their old salary levels after roughly five years of lower wages. As a result, permanent losses in total lifetime earnings are unavoidable. As such, the dislocated worker is the proverbial "person in the middle."

The dislocated worker is disadvantaged when compared to his or her peers and is decidedly advantaged when compared with the hard-core among the unemployed and poor. Many oppose utilizing public resources to assist dislocated workers because they believe assistance will impede the natural workings of labor markets with employment protection. Because disadvantaged workers have a prior claim on scarce resources and because, by the implicit "rules of the game" in the American economy, dislocated workers are those who made the same career gamble as each of us did—and lost. In the latter case, those who argue against programs for dislocated workers suggest that the society cannot guarantee human resource investments any more than it can guarantee returns on other forms of investment.

Finally, those with a more political bent oppose extending assistance to dislocated workers because they believe assistance to the dislocated worker is the "cutting edge" of the gathering momentum to expand public intervention into the employment and training of the mainstream adult work force. Those who oppose such intervention do so on various grounds, including a traditional conservative revulsion at public intervention into the private economy, an efficiency argument that such interventions simply will not work, and an appeal to budget orthodoxy that suggests that even the smallest of such programs would put the "camels more under the Treasury's tent" in terms of its potential for expansion as one more runaway federal program for middle-income support.

Whatever their reasons, most of these protagonists would draw the skirmish line at aid to dislocated workers for fear it would spread to others among relatively advantaged workers, thereby vastly expanding the public role in American labor markets. Interest in dislocation, as well as in the productivity and career prospect of the entire work force is more intensive at the moment than at any time in the postwar era with the exception of the period from 1960 to 1962 when a similar interest was generated by the "automation" scare (Killingsworth 1978).

As to the roots of this renewed concern, one can only speculate. There are single factors and combinations of factors that may account for the current popular concern: declining opportunity for the college educated, reduced worker productivity, loose labor markets from persistent economic restraint, midcareer plateauing among the baby boom generation, a media panic over the displacement effects of technology and foreign trade, and perhaps a fundamental polarization of job opportunities with fewer and fewer good jobs and more bad jobs.

Whatever its source, however, there is a definite trend toward the provision of employment and training under public auspices for advantaged workers. Proposals for "individual training accounts" for all Americans, a system of universal loans and increased taxation, and regulation of employer training are only a few of the concrete legislative proposals already in evidence (Walsh 1983). To a certain extent, these proposals are a natural by-product of the new supply-side focus of both conservative and liberal policymakers in search of a new growth strategy to substitute for or complement the Keynesian policy model. A productivity-based (as distinguished from an equity-based) human resources strategy complements the current political interest in growth and investment policies, especially in their more liberal format as "industrial" or "revitalization" policies with an emphasis on economic planning.

Dislocated Workers

The size and scope of the dislocated worker problem is dwarfed by the problems of the hard-core unemployed. At the same time, the loss of earnings that characterizes dislocation is substantial. In addition, good manufacturing jobs for relatively uneducated workers represent the difference between middle-class prosperity and low-wage work with little job security and no career ladder. For these reasons, reemployment in an inferior job is often permanent for as many as 5 percent of dislocated workers. The adjustment process is always traumatic as a result of the economic free-fall that dislocation always threatens and often delivers.

Strategies for minimizing displacement are encouraged for more than the interests of affected employees. The ability of the United States to adapt to changing technologies, economic conditions, and accelerating world competition requires that the economy constantly adapt to new opportunities. Many favor policies to ease the burden of dislocation because they believe economic change is accelerating and fear that the anxiety that accompanies dislocation may encourage protectionist resistance to the adaption necessary for the American economy to maintain and improve its competitive advantage.

Public policies for worker dislocation have been a theme in federal employment policy since the passage of the Manpower Development Training Act (MDTA) in 1962. The concern for the dislocation, as expressed by the MDTA, was due to automation and the fear that the "Kennedy Round" trade negotiations would exacerbate dislocation. As the Comprehensive Employment and Training Act (CETA) evolved to provide training and employment for the disadvantaged (as its principal purpose), dislocation became a minor theme.

Provisions enacted in the Trade Expansion Act of 1962 to provide adjustment assistance to workers dislocated by foreign trade lay dormant until trade negotiations heated up again in the early seventies. The 1974 Trade Act liberalized benefits and eligibility considerably. Payments to workers dislocated by trade policies increased rapidly under Trade Adjustment Assistance until they peaked at $1.6 billion in 1980. Over the same period, some twenty-two other readjustment programs were authorized to provide income support and benefits to employees in specific economic sectors, especially in transportation and communications.

In the early eighties, the adjustment assistance programs came under considerable criticism because the programs supplied too much income support and too little adjustment. The Trade Adjustment Assistance program was amended to reduce payout substantially. Benefits are not likely to exceed $75 million in 1983. Major responsibility for adjustment through job search assistance and training was shifted to the Job Training Partnership Act of 1982. Title III of that act establishes a 50 percent federal-state cost-sharing program to aid dislocated workers.

The future extent of dislocation is still uncertain. As elaborated earlier, available empirical evidence suggests that dislocation will remain a relatively limited phenomenon. At the same time, elusive trends could arguably dislocate substantial numbers of employees, especially in manufacturing. The current uncertainty as to the future of dislocation suggests a flexible approach. The most effective programs are those that identify dislocation early. Experience to date with prior programs and U.S. Department of Labor demonstrations also suggests program formats that emphasize early identification of dislocated workers. Also needed are such services as skill assessment and job-search assistance, which encourage dislocated employees to come to grips with their prospects early and begin the unavoidable trauma of transition into a new and (probably) lower-paying job.

Prior notification of plant closings is helpful to employment training programs in this regard, but difficult to obtain in an economy where most business closings involve very small firms or sudden changes in prospects. One flexible approach is the state-by-state development of "gentleman's agreements" calling for such notification of closings with firms over a certain size or industries critical to the economic base of the state or individual community. In addition, homogeneous policies are the more difficult because the specific nature of the dislocation problem varies immensely with plant size, community size, industry, and economic region.

The Canadian Manpower Consultative Service (MCS) offers a model that is both flexible and effective. The MCS assists managers and workers in firms experiencing significant instability or dislocation. The MCS format works informally and can customize a variety of financial and labor market services for troubled firms. Both services to workers and capital are provided. A first priority, where plant closings are concerned, is to salvage the firm or profitable portions of it in order to preserve as much as possible of the original employment base. Inevitably, the major services needs are those of individual dislocated workers. A first priority in this regard is, where possible, to assist workers while they are still employees and, in applicable cases, union members as well. The adjustment process is facilitated most by peer support in familiar insititutional surroundings.

These reforms could be integrated most flexibly in the American system if they were tied to the unemployment insurance (UI) system. UI is a maleable delivery system that expands and contracts with use more easily than appropriated and administered programs. The UI structure is an ideal delivery system for dislocation services, irrespective of their eventual scope. A UI-based program structure similar to the following has been suggested by various students of worker dislocation:

- By week thirteen of regular UI benefits, most workers have found employment or dropped out of the system for other reasons. At week eleven, all remaining recipients would be assessed. Former employers would be contacted to ascertain whether recall was probable. Claimants who would benefit would have their skills and labor market possibilities assessed to encourage a practical and psychological recognition of labor market possibilities.

- After sixteen weeks of UI, all remaining claimants would be required to partake in "job search assistance" (JSA) classes or "job clubs" or both. These treatments have been found to cost little—$200 for JSA and $800 for job clubs per participant—and to be as effective as training in providing "positive transitions" for dislocated workers.

- After twenty-six weeks—the conclusion of regular UI—thirteen weeks of extended benefits would be offered on condition that the enrollee accept training and an orientation program for relocation.

- After twenty-six weeks, all asset requirements should be dropped for federal education loans and grants, for federal welfare programs, and for employment and training program assistance.

The financing of the additional services required by such a system presents problems. Just about everyone benefits from retraining, including individual trainees, employers, and the nation as a whole. Dividing up the cost of retraining, however, is difficult. Without major reforms, the UI fund is insufficient.

It has been projected that by the beginning of FY 1984, thirty-five states may be in debt to the federal UI trust fund to the "tune" of $18 billion. Voluntary training arrangements, such as those bargained by the United Auto Workers (UAW) and General Motors, are laudatory, but in general, it is not clear why a previous employer should finance training that will ultimately benefit the next employer.

Taxes on individual wages, property, and consumption are already too high. If there were to be additional payroll, property, or excise taxes, it is likely that Americans would prefer that they be used for other purposes, such as health care, housing, or pensions, rather than for training. Perhaps the best we may ask, in the short term, is for a continuation of current resource commitments and attempts to generate additional resources through UI tax reforms. Current debts in the UI system could be eased and casual or temporary layoffs reduced by increasing the maximum UI tax. This reform would also ease the unfair tax burden on firms with stable employment patterns by eliminating the practice of their subsidizing firms with high layoff rates.

Upgrading

By 1941, the United States had become a major military power. World War II unleashed our economic leap forward and gradually gave birth to a new social optimism based on our economic success. The "hot house" economy of the postwar boom made it seem that we could produce abundance on such a scale that social problems would be drowned in a sea of resources. Social conflict and the ideologies that fed upon it would be abolished forever. By all reports, our principal problem, as we ran pell-mell towards "the postindustrial society," was to provide for meaningful leisure.

In the late forties, the abundance of resources organized for war production remained stimulated during the postwar era by the pent-up demand for consumer goods that war wages provided and by a remarkable growth in American exports. The result was relatively effortless growth. The private economy mobilized capital and maintained a high-quality labor force on its own. The quality of the American adult work force was not a public concern. Public policies to promote the productivity of adult workers were nonexistent because they seemed unnecessary.

Public concern did not extend to the quantity, quality, and distribution of machine and human capital in the workplace. The principal economic concern for public policy was the maintenance of overall levels of demand and price stability. Our economic system seemed to have the self-sustaining power and perfection of a social gyroscope. Once set in motion, it spun free at ever accelerating rates. Production generated income, which, in turn, encouraged production.

All that was required of economic policy was to brake or nudge the spinning wheel of production. Moreover, public interventions could be neutral and removed from production itself—a matter of political convenience for a society horrified at the excesses of planned societies in the

eastern hemisphere. The public sector economic levers braked or nudged the free-spinning economic wheel externally at the point of demand. Policies for the general development of human capital, resource management, and the integration of labor and new technologies were unnecessary.

Human resource policies for working adults existed, of course, but they had little connection to economic policy. The G.I. Bill was an attempt to absorb returning veterans lest they become unemployed. The remainder of the human resource development policies targeted on adults was usually intended to compensate those who, for one reason or another, were unable to share in the largesse of the American economic marvel. Most human resource development policies were equity-based. They intended to promote fairness in the distribution of income and opportunity.

A second set of programs was not equity-based in the sense that the programs were not "needs tested." These programs tended to provide income through such schemes as Social Security or encouraged consumption of health care, housing, and other goods and services, irrespective of the individual recipient's income class. The important point here, however, is that the promotion of economic efficiency in the development, use, and allocation of adult human resources was largely left to the labor market.

With the declining productivity and growth of the sixties and seventies, the driving force behind public policies shifted from the distribution and consumption of the wealth generated by a growing and productive economy to the promotion of growth and productivity itself. That single-minded public purpose has already been variously announced, with calls to a series of economic "gimmicks" to substitute for traditional economic policies.

Reindustrialization, "economic revitalization," "supply-side economics," and "industrial policy" are the recent pretenders to the Keynesian throne. For the most part, these policies intend to encourage savings and investment at the expense of consumption. The proposals vary mostly in the relative extent to which they would intervene into private markets to mobilize and target investment. The supply siders, for instance, would preserve the traditional macroeconomic tactic of managing the economy from afar through the manipulation of economic aggregates. The industrial policymakers are much more willing to intervene directly into the private economic sphere with regulations and incentives. Although the means differ, their common end is to increase savings and investment in the interest of long-term growth.

The human resources dimensions to these policies tend to focus on increased human capital investments to promote preemployment educational "excellence" and to improve productivity among employees—a radical departure from the traditional concern with the unemployed and disadvantaged. These "human capital" policy proposals—to use the term journalistically—are driven by a flammable mix of politics and economics. Both political parties are headed toward productivity-based training incentives for mainstream workers.

Democrats have already embraced the notion in their midterm platform—albeit with a strong role for public institutions. The "Atari Democrats" are especially solicitous of high-technology employee training. In their rush to rebuild their human resources platform (in order to shed the image as the party of welfare giveaways and pork-barrel CETA training), Democrats are embracing productivity and growth-oriented programs. As a result, many Democrats are endorsing training programs for the relatively advantaged. Republicans, lest they seem too hard-hearted, are in search of a human resources posture. Productivity-oriented programs targeted on the advantaged are a natural for Republicans, who project themselves as the party of responsible economic management, productivity, and private initiative.

State and local politics are not immune to the political logic of "human capital" programs. Governors increasingly run, and are elected, on economic development platforms. Strategies to attract new firms into states and regions invariably focus on the state's human capital infrastructure as a selling point. In addition, the cleaner, higher wage industries that are "plums" in the interstate competition for new industry generally require extensive human capital development facilities for their highly trained work forces and good schools for the children of their well-educated and affluent employees. Indeed, recent surveys indicate that the human capital infrastructure has become the pivotal relocation factor for preferred high-technology industry (Premus 1982).

Additional political interest in human capital programs for mainstream Americans derives from public and nonprofit institutions. Throughout the postwar era, most of our preemployment human resources development institutions have derived a major share of their revenue from public support. Public funds have been available throughout the postwar period to provide education, training, and social services. The subsequent addition of funds, especially federal funds, targeted on the disadvantaged in the "Great Society" years added a redistributive focus to the welfare state in America.

The subsequent deemphasis of these purposes and the simultaneous aging of the baby-boom population beyond the reach of these institutions has resulted in declining fiscal support for the mission of these institutions. As the central theme of public policy shifts toward growth and productivity and the American population begins to concentrate in the twenty-five to forty-four-year-old age cohort, public and nonprofit institutions in search of a new mission and new revenues assert their role in improving productivity and overall economic performance and their role in delivering human development services to relatively advantaged adults.

The emerging interest in "human capital" programs for adults also has profound economic roots. The importance of human resources to the long-term growth potential of any society is clear and well known (Carnevale 1983). The need to adapt human resources to economic change is equally evident. Moreover, in the absence of rites of transition that ease human adaptions to changing technologies and economic circumstances, a virulent protectionism may impede adaption and erode competitive advantage.

Evidence exists that we are underinvesting in human resources (Choate 1982; Medoff 1983). Systematic statistical proof and anecdotal evidence is supported in theory. Incentives for human resource investments appear to be weak. These disincentives for human resource investment stem largely from the inability to divorce people from their economic value. It is difficult to separate what is consumption of human services from human capital investments. At what point, for instance, does entertainment stop becoming an investment that provides distraction now in order to improve productivity later, and when does it start becoming pure consumption?

Unlike physical capital, human capital can never be owned or moved about freely. In addition, human capital is not divisible and reallocatable as are financial capital and, to an extent, machine capital. When a machine becomes inefficient it can be used for parts or sold as scrap. People are not so easily redeemed when they have outlived their economic utility. Moreover, measurement and human capital accounting are virtually impossible, given the amorphous and organic nature of the human resource. In the absence of effective measures of value, investment risks are always uncertain and depreciation difficult. Finally, the value of the human capital produced is difficult to hold as collateral to back up investment loans; Shakespearean fantasies and terrorist realities aside, money is not redeemable in human flesh.

Underinvestments by employers may also result from the fact that employers cannot realize the full return from human capital investment. Private economic benefits to individuals and economic benefits to the society at large are likely to exceed the return on human capital investments that employers may reasonably expect to capture. When an employer trains employees, society benefits from their increased productivity and they carry away the skills acquired and sell them without repaying their employer. For this reason, employers have an incentive to attempt to limit training costs to those skills that may be expected to benefit the firm during their employees' tenure and, at the same time, encourage their employees to make a commitment to stay on so that employers can maximize benefits from their employees' experience and training

Economywide benefits from education and training are especially likely to be slighted during economic downturns, when human capital investment incentives are weakest. Individuals are unlikely to invest in their own human capital when the prospect of earnings and employment opportunities are pessimistic. Firms are equally reluctant to invest in the productivity of their workers when inventories are piled high and sales are declining. Employer investments are also likely to be reduced below optimal levels with beggar-thy-neighbor policies that encourage one firm to invest in training while another employer down the road invests in wages to pirate away trained personnel. If an employer expends $4 an hour to train an employee and the employer down the road waits until that employee has finished training and offers him or her a $3 per hour raise, the new employer has saved $1 per hour in training costs. The former employer, on the other hand, loses the $4 per hour and the increased productivity resulting from the training, as well.

The relative incentive as between human and plant and equipment investments in federal tax law is less certain. Education spending for individuals is deductible only if it improves performance in the current job, thereby placing a ceiling on individual human development. The balance of incentives to institutions are less clear. Most human resources development institutions are granted a nonprofit status. This reduces taxes and costs, thereby subsidizing human development and encouraging the use of the products of these institutions. Employers are allowed to deduct the full cost of training and employee benefits as a business expense.

Capital and equipment allowances, in the form of tax credits and depreciation allowances, are more powerful than deductions but cover less than the full cost of plants and equipment in any single year. This fact has led some analysts to suggest that federal tax incentives are strongest for human development. Partial credits and depreciation allowances for plants and equipment in any single year, however, are deceptive. For instance, if a firm invests $100 million in capital and $100 million in training in the first year of the firm's operation, actual tax savings for plants and equipment may be less than tax savings due to training deductions in the first year. After a number of years, however, combined credits and depreciation allowances for plants and equipment in any given year may constitute a much larger proportion or even equal spending for plants and equipment in the current single year. The relative incentives for human and machine capital investments are difficult to trace and deserve more empirical attention.

Another concern is that, although we may be spending enough for education and training, the spending may be poorly distributed, especially between preemployment and adult education and training. The United States spent $220 billion for education and training and $296 billion for plants and equipment in 1980. About half of the total spending for education and training was for elementary and secondary education. Another $60 billion, or 27 percent, is for higher education. Much of this spending is publicly financed and serves other than strictly economic purposes. Only $30 billion of the total education and training expenditure, or 13 percent, is financed by employers and driven directly by immediate economic incentives in the workplace.

An additional $10 billion in employer training is supplied by the government (civilian and military) comprising roughly 5 percent of all education and training. Federal programs for employment and training add to $14 billion, or 6 percent of all education and training. The distribution of education and training spending raises two difficult questions.

First: As the baby boom shifts into adult age categories, will market incentives for training and other human resource investments be sufficient to supply the human investments necessary for growth? Most of our education and training infrastructure is dedicated to preemployment education and training. Fully 76 percent of our education and training expenditure goes for elementary, secondary, and higher education. Only 11 percent is employer based and provided for employed adults.

It is unclear whether these proportions will shift toward adult job-specific training as the population ages. When the baby-boom cohort was young, public investments increased dramatically to cover human resource development needs. As the baby-boom cohort ages, we will have to rely on market incentives to encourage human capital investments. (The disincentives to adult education and training investments were discussed previously.)

When we add to these the apparent age-specific reality that the baby-boom cohort will remain in various stages of family formation throughout its twenty-five- to forty-four-year-old stage, the prospect for market-induced adult training investments becomes all the more pessimistic. The aging American work force is more likely to invest in housing and other consumer durables that dominate spending in family life, rather than training.

Second: Is the relative distribution between preemployment and adult education and training sensible, given current job requirements? The current oversupply of college graduates suggests that there may indeed be an imbalance between preemployment and adult human resource investments.

Numerous anecdotal arguments suggest that an underinvestment in adult training exists (Carnevale and Goldstein 1983). The most prevalent is the argument that the American economy is experiencing significant skill shortages. In theory, underinvestments in training, encouraged by slack demand will result in "spot shortages," which become especially evident as recoveries increase demand. Empirically, however, these shortages have been difficult to nail down. Numerous reports and articles suggest that certain shortages exist—notably of engineers and machinists. Most of these assessments, however, are methodologically flawed.

The fundamental flaw in most estimates of skill shortages is a failure to account for the informality of the American training system, especially in the workplace. Most of us learn our job skills on the job, formally or informally, and without benefit of elaborate credentialing structures. Estimates of skill shortages generally ignore this fact. They tend to estimate the number of graduates from formal preemployment training programs, accredited adult training outside the workplace, and certified apprenticeship. These studies then match this supply against projected demand from U.S. Bureau of Labor Statistics data. The result is huge artificial shortfalls and shortages (Spring 1981).

A more creative and indirect approach has been attempted by Medoff (1983), who points out that the number of help-wanted advertisements and trade press articles on skill shortages has increased dramatically vis-a-vis employment and unemployment rates. Through creative and careful econometric analysis, he contends that increased help-wanted advertising, in combination with increased quit rates and "firings with cause," suggest labor market imbalances and skill shortages that could account for the unexplained share of productivity declines.

Proposals for mainstream worker training have come in various shapes and sizes. At present, there are as many as a hundred such proposals in legislative form in the U.S. Congress, depending on how one chooses to count them (Walsh 1983). Those of grandest scale provide individual training accounts for all Americans. First proposed by Striner (1972), this approach has since been elaborated upon by Vaughan (1982), Choate (1982), Taggert (1981), Bendik (1982), and Bluestone and Harrison (1982).

Another unique proposal by Choate (1982) would put employer-provided training on an equal footing with plant and equipment investments, allowing employers to apply investment tax credits and other tax advantages equally to plants and equipment or human resource development. Other proposals focus on employer-provided training in specific industries or subject areas. One proposal that made it as far as the floor of the U.S. House of Representatives would have assigned responsibility for skill training for defense production to state vocational agencies. Other proposals have emphasized scientific and technical training.

The implications of these human capital investment proposals for distressed workers vary with program structure and financing method. In the long term, any investment incentive will increase overall output and create jobs. This is especially the case in modern industrial economies such as our own. In a flexible, free-market economy, wage rates will always decrease so long as unemployed workers are willing to accept wages below those of the employed, and full employment will be guaranteed. In modern economies, however, both implicit and explicit wage contracts and the fear of disrupting team productivity reduces wage flexibility. In such an environment, wage flexibility is an inefficient lever for creating additional employment. Where wages are rigid, investment in both people and machines becomes the principal lever for increasing overall output and productivity and, thereby, expanding the number of jobs. In addition, it is arguable that upgrading existing employees will create job vacancies at the entry level for new hires.

Then again, these "trickle-down" strategies take time and, as Keynes would have it, "in the long term we will all be dead." The short-term effects of these proposals are less optimistic and depend largely on programmatic structure and financing mechanisms. The immediate effect of any growth strategy that emphasizes savings and investment, whether it be "supply-side economics" or "industrial policy" and whether the investment occurs in plants and equipment or people, is bound to draw resources from consumption and reduce the overall number of jobs.

To the extent that such programs improve productivity in the short term, they will also reduce jobs. This is especially the case in an economy such as our own, where investment strategies are combined with overall demand restraint to fight inflation. In such a situation, overall sales and market shares are unlikely to increase with a resultant increase in jobs. The effect of productivity increases is to add to profits by reducing costs per unit of output. In such an economic environment, the disemployment effects of investment are encouraged and secondary expansion in overall economic capacity is restrained. The reality also exists that any increase in overall spending from human capital development makes the costs of compensatory, catch-up programs for the disadvantaged even more difficult and expensive to implement.

A productivity emphasis generally does not favor the hard core among the poor and unemployed. As noted previously, employment and training programs targeted on these populations do increase earnings. But they increase earnings mostly as a result of hours worked and only marginally as a result of increased earnings per hour—a proxy for productivity increase. As a result, although these programs may increase overall output in the American economy by eliminating the "dead weight" of the dependent unemployed, they do not increase output per

person (productivity). (As a matter of fact these programs have probably reduced output per person.) As noted earlier, in the past these programs have overwhelmingly emphasized increased hours worked and job creation over training. A stronger financial and administrative commitment to training targeted on the hard-core disadvantaged may increase the productivity effects of the programs; however, no such commitment seems likely in the near future.

Effects of investment-oriented programs targeted on the advantaged also depend on the design and financing of the program in question. Any program that is financed with payroll or other taxes on employers will increase costs per job and discourage additional hiring, especially in good jobs where wages, benefits, training costs, and search costs are already high. Fringe benefits have already increased employers' cost per job enormously. Fringes have increased from 15 percent to 32.5 percent of payroll since 1950. The costs of these benefits make each new job more expensive and reduce the number of jobs—especially the number of good jobs with benefits—that the economy can afford.

Additional employer-based taxes will increase the costs per job and provide further incentives for shrinking the overall number of good job slots available to American workers. Indeed, one viable strategy for increasing the number of good jobs available to the disadvantaged would be to eliminate the special tax status for many of these nondevelopmental fringe benefits. Such benefits have expanded in part because of their special tax status. They will engender $84 billion in federal revenue losses in 1984 and will grow to more than $152 billion in revenue losses by 1988.

Similarly, programs supported by employee payroll taxes will reduce disposable income and create upward pressures on gross wages to recoup losses to disposable income. As wage costs increase, so do costs per job. Alternatively, programs financed by the government will reduce employer training costs and expand employment in much the same fashion as a wage subsidy. Moreover, training subsidies paid for outside the firm will increase jobs over the longer term by providing productivity increases in the manner explained previously.

Third party payment for training, however, should never be allowed to cover all costs. Free training will not encourage cost-effective uses of training funds. Moreover, there is a more fundamental public issue of priority. Subsidies for relatively advantaged workers would probably encourage productivity and economic growth. Such subsidies, however, would be inadvisable unless they were funded via the federal spending reductions elsewhere, given the size of the current and projected deficits. One logical trade would be to cash in some of the current employee fringe benefits or other corporate benefits to pay for increased adult education and training. Finally, such subsidies should be a secondary priority to funding for education, employment, and training programs for those most in need.

Program design may determine program effect, as well. Enhanced tax subsidies at the present time, when employer taxes are low or nonexistent, are not likely to create much training. Unless the credit is refundable and includes an appropriated counterpart, training incentives will not reach many private firms and will exclude public and nonprofit employers. Loans provide some interesting possibilities. Any expansion in loans for human resource development encourages a long-term market in human capital similar to other capital markets. Loans can be made available to individuals or governments and required repayment encourages cost-effective investment. Bluestone and Harrison (1982) provide an interesting twist in their loan proposal, suggesting that loans should be made to individuals and repaid with a surtax on individual income. Such a scheme would result in repayment schedules that reflect income returns on education and training investments and may socialize some of the risks (spread the costs evenly over the public) inherent in human capital investments.

One other means for upgrading team productivity and expanding available jobs is to reform the management of human resources. Improved management can discourage the negative productivity effects of inherent tensions in the American workplace. The tensions are profoundly rooted in discontinuities between our culture and polity, on the one hand, and our economic organization on the other. Americans value participation as a result of political values and traditions. Individualism is valued as a cultural norm.

At the same time, our production processes, especially in manufacturing, emphasize the rationalization of production into discrete tasks and skills and the hierarchical organization of tasks and skills into a carefully planned production schedule. Bell (1978) and others have argued that our cultural valuation of individualism and our political valuation of participation are in conflict with the dominant mode of economic organization. Organizing work around discrete tasks and skills in an authoritarian hierarchy denies participation and dissolves the attention of individuals into minute tasks and skills that ignore the whole person. The common and currently popular remedy has been to emphasize participation and the "whole person" in the workplace. Substantial evidence exists that these new organizational forms and styles pay off with higher productivity (Ouchi 1981; Stern 1982; Walton 1979).

Yankelovitch and Immerwahr (1983) suggest that providing for participation and individual discretion is only a first step in better management of human resources. Their research suggests that new incentive structures are required. This point is well taken. In truth, individual autonomy and discretion have probably been increasing in the workplace anyway. The trend toward service and information jobs, where tasks and outputs are difficult to define and measure, allows for considerably more individual autonomy than traditional factory jobs. The increase in personal interactions characteristic of these jobs also allows employees to exercise the whole person in a work setting. New technologies have also allowed more individual autonomy as they routinize otherwise dull, dirty, and even dangerous tasks.

Research (Yankelovitch 1981) tends to bear this out. Workers believe that they enjoy more discretion in the workplace. They tend to agree that it is up to them to gauge their own work effort and to set standards for the quality of their work. At the same time, the vast majority of employees agree that they do not work up to their potential (Yankelovitch and Immerwahl 1983).

An abundance of research and opinion surveys demonstrate overwhelmingly that the problem is not with the "work ethic." That appears stronger than ever. When asked why they do not work up to their potential, American workers respond that "it wouldn't make any difference in the distribution of recognition and material rewards." They tend to see themselves as hapless individuals in a large and manipulative social system over which they have no control. They assert that recognition and rewards are given out on the basis of predetermined bureaucratic principles that allow little discretion or room for individual achievement and recognition.

Autonomy and discretion do not appear to result in greater productivity in environments where bureaucratic and impersonal incentive structures prevail. This is equally true of public and private bureaucracies. Indeed, the combination of individual autonomy and bureaucratic incentive structures probably encourage labor "faking." If effort and quality do not matter and the employee is autonomous, both effort and quality probably suffer. Much the same is true for employment security.

Employment security is critical to team productivity. In the absence of employment security, the informal processes of integrating new workers into the production team, passing on skills to

other workers, and accepting new technologies are disruptive and subverted. When employment security combines with a highly bureaucratic and impersonal merit system, it seems to discourage productivity, quality, and work effort. When combined with merit incentives, however, it seems to encourage work effort, quality, and productivity (Stern 1982).

If the latter diagnosis is correct, alternative reward and incentive structures may stimulate real improvements in productivity and output, allowing for more jobs overall and more good jobs. At the same time, in an era when national resources are leveraged mainly into growth capital, it will be difficult to build a strong system of wage incentives. The alternative that will allow expanded work incentives and hold current cash flow in the form of wage costs to a minimum is some form of gains sharing that rewards individual employees or employee teams, at least in part, with long-term capital.

In other words, if you cannot give the employees all the money they deserve, give them "a piece of the rock." In addition, since rewards would be attached to company or unit performance, the gains sharing that results will limit some or all of wage gains to overall unit or company performance, maintaining a rough equivalency between productivity and wages. Whatever portion of gains sharing is given (in the form of nonliquid capital instead of cash) increases the employees' future wealth but reduces the current cash flow into wages. In short, such schemes provide financial work incentives with a minimum of inflationary impact (Mitchell 1982b).

GOOD JOBS, BAD JOBS, AND NO JOBS AT ALL

America is a society based on work. A minimum living standard and full participation in the polity and culture are guaranteed to those who are either willing and able to work or to those who cannot work by virtue of their age, family responsibility, disability, or inability to find a job. Work for all who want it has been elevated to a public commitment and a popular expectation encouraged by the promises of successive governments and the assertion by modern "technocrats" that they have the understanding and tools in hand to deliver on full employment.

Full Employment

The public commitment to full employment is complicated in the American system by our economic organization. Whereas public leadership may accept responsibility for full employment, the actual authority over hiring and firing rests with the separate decisions of a myriad of individual employers. This separation of the public and private sectors is preferred by Americans. For a variety of reasons, Americans have traditionally chosen to limit the power of governments. We have tended to utilize private economic organization as a hedge against governmental power. As a result, we tend to opt for a clear separation between these two countervailing sources of social authority, lest one overwhelm the other or, worse still, lest they should openly combine forces. Consequently, policies that best preserve this separation between the public and private realms are preferred in the United States.

Our taste for economic policies that manage the economy with the manipulation of economic aggregates preserves a measure of distance between the public sector and the actual operations of individual enterprises. It also makes full employment more unresponsive to these macroeconomic policies. The result has been that broad expansionary policies create fewer jobs and greater amounts of inflation the more they are used. Conversely, the trade-off between macroeconomic restraint and price stability has become an equally bad bargain. Ever greater amounts of unemployment seem to be required to achieve price stability. Moreover, prolonged restraint seems to reduce the overall employment potential in the economy as investment disincentives fall equally on fertile and fallow economic fields.

In the meantime, we have not pursued microeconomic policies for promoting price stability. Such policies would allow greater overall expansion and reduced interest rates to promote further saving, investment, and growth. Instead, we have maintained a broad macroeconomic restraint through the elitist and unrepresentative offices of the Federal Reserve Board, while elected leaders distract the public with rhetorical and "gimmicky" growth proposals. Moreover, although speculative macroeconomic growth strategies occupy most of our time and attention, proven microeconomic strategies that can provide some measure of increased employment without inflation are not seriously discussed.

The road to full employment is complicated further by our competing goals. Throughout much of our recent economic history, budget orthodoxy, balanced trade, a strong dollar, price stability, and various other domestic and international purposes have been pursued independently

of their effects on employment. The goal of price stability has preempted full employment since the late sixties. Each of these goals is legitimate. It is arguable, for instance, that price stability represents a prior claim on public authority. A stable currency represents a trust between governor and governed that long precedes Keynesian notions of full employment. At the same time, however, to the extent that these various goals make claims on macroeconomic policies, those policies are limited in their potential for encouraging full employment and additional policy instruments will be required if we are to achieve full employment.

In concept, a mix of macroeconomic and microeconomic policies could attain price stability and arrive at full employment. Our experience with microeconomic policies, however, has been limited and in some cases disappointing. A time-consuming process of trial and error would be required. Moreover, once the summit of full employment was attained, we would have to learn how to hold or retake it after unforeseen and inevitable price and employment shocks.

Equal Access to Jobs

Challenges await beyond full employment. The Fourteenth Amendment's guarantees of "equal protection" are belied by the persistent concentration of specific groups and geographic areas at the lower end of the income distribution. The increasing disparity in incomes threatens our survival as a free and democratic society. Historically, we have attempted to redistribute earnings by providing access to preemployment education and training. Yet, the state of the economic art suggests that much of lifetime earnings are driven by access to workplace training. In other words, the distribution of earnings is determined, in large part, by the distribution of jobs. Barring massive increases in progressive taxation or income redistribution through government subsidy, the distribution of jobs remains the principal lever for changing the consistent and worsening maldistribution of earnings.

Even in prosperous times, the problem for a consistent minority has been in finding a good job rather than in merely finding work. Over the past decade, this same difficulty has extended to the relatively advantaged. There appears to be no shortage of workers with sufficient preemployment educational credentials or native abilities. Instead, the economy appears to be suffering from a shortage of good jobs—jobs characterized by training, employment security, and a career ladder. As a result of this phenomenon, the income disparities among people with the same educational levels has expanded to equal and even exceed income disparities among educational levels. Some claim that the number of good jobs will decline further as high-wage but relatively low-skill manufacturing jobs disappear, and most job growth occurs in low-wage, low-skill jobs in services. These analysts argue that the American economy is rapidly polarizing into an elitist distribution of job and income concentrations and that the midlevel job and income cohorts are disappearing.

Inequities in job distribution may be addressed in various ways. So long as inequities are limited to a highly concentrated cohort of minorities and females, affirmative action and other redistributive policies can be effective only if they are aggressively utilized. Additional changes might be needed to make minorities and females better substitutes for white males. Compensatory education and training will help in "tight" labor markets, but in a slack labor market they are likely to have little effect. Overall economic expansion is a necessary (even if not a sufficient) condition, for redistributing jobs. With full employment, institutional changes in the structure of the labor market could be attempted.

Undesirable secondary jobs could be made less casual and less seasonal. "Decasualization" and "deseasonalization" has been accomplished before—on the docks, in manufacturing, in

trucking, to a certain extent in migratory agricultural jobs, and, most recently, among low-paid supermarket employees—by a combination of legislation and unionization. A reform of the UI tax mentioned previously, in which the maximum tax rate could be increased for employers with high layoffs, is an example of such an approach. Wage subsidies and training subsidies to discourage temporary layoffs are other examples.

The polarization of American jobs into relatively few good jobs is not assured. If polarization does occur, however, we can expect a more shrill debate over job structure and the allocation of the few good and the many bad jobs. Public commitment to a distribution of income that is fair and random with respect to personal characteristics has already been made. Related commitments to an income distribution with a high concentration around the median income level and the shortest possible distance between the median and both "tails" of the distribution are also implicit in the American political paradigm.

To the extent that a polarization of earnings from jobs occurs, it may violate both these precepts and encourage public remedies. There are already signs of a debate over job quality and earnings. The female lobby has pushed the quality issue for some time. The feminist's notion of "comparable worth," which asserts that jobs with equal intrinsic value should pay equally, is the most radical attempt thus far to alter the distribution of earnings that results from the current distribution of jobs. The crowding of twenty-five to forty-four-year-olds into the workplace with limited opportunities for promotion may also raise the job quality issue.

If these separate streams of interest in job quality and its impact on earnings combine with the traditional concerns of the disadvantaged in the distribution of good and bad jobs, significant social pressure to do something about job quality and its impact on earnings distribution is likely to result. Moreover, if the polarization thesis is correct, an interest in job quality could extend to the political majority. Three kinds of remedies would be likely. First, forces might emerge to encourage the redistribution of earnings from jobs. Second, there would be pressure to redistribute good and bad jobs "fairly." Third, economic incentives to target growth on those sectors that tend to produce good jobs would also be likely. Industrial policy might become a populist issue rather than the province of the elite few concerned with capital formulation.

Jobless Growth

The most radical challenge beyond full employment is the possibility of "jobless growth." The claim that technology will make the creation of fabulous wealth feasible, in the absence of all but the most esoteric of human labor, should not be ignored. Such an eventuality may leave our participatory politics and individualistic culture in place and even vitalize them beyond our current imaginings. At the same time, such an eventuality would surely bring the curtain down on our work-based society.

Someone has to buy the services supplied and the goods that technology fabricates. Income necessary to maintain overall demand would have to be distributed on the basis of some yardstick other than work. The thought of such a possibility can only leave a social scientist dumbfounded. The look of such a world is best left to the intuitive imagining of the arts. Indeed, the work-based society may be a short-lived phenomenon. Recall that the investment of our whole selves into work is a relatively recent phenomenon, and the prospect of separation from work becomes less radical. The glimmerings of that future will be upon us shortly when, with the aging of the baby boom, the number of dependent Americans will approach a third of the working population.

In the meantime, the work-based society is here to stay, and distress in the workplace from unemployment, underemployment, and severe dislocation presents a threat to our economy, culture, and polity that cannot be defined or theorized away. Rationalizations and apologies for the status quo that "beg the question" by claiming that unemployment is a "natural" phenomenon are inadequate guides for strategies to remedy distress in the workplace. Ideologically and theoretically perfect remedies, whether of the free market or planned variety, should not be allowed to crowd out less elegant but workable strategies.

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